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ISAAC ASIMOV'S SCIENCE FICTION

AUGUST 1987
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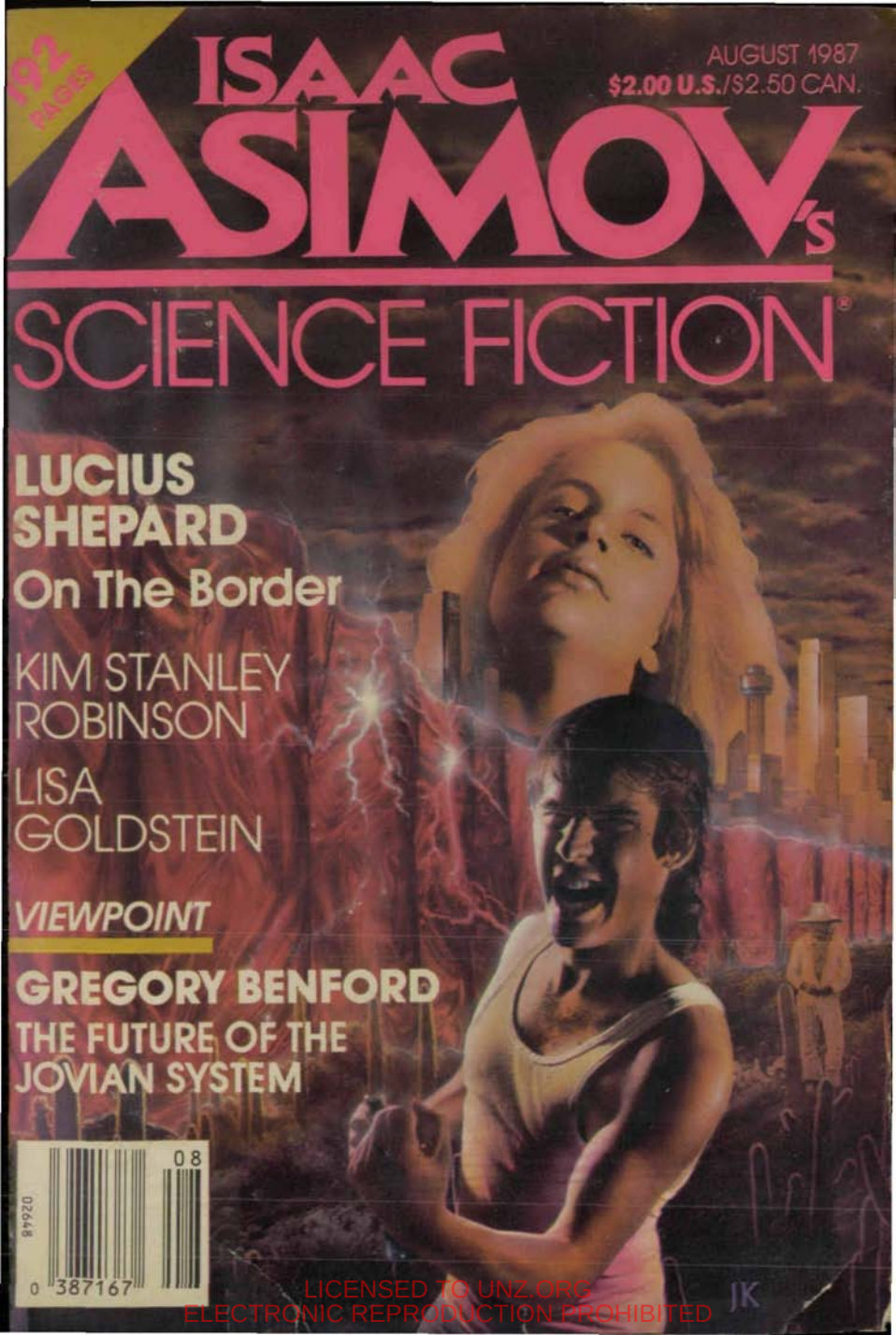

LUCIUS SHEPARD
On The Border

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VIEWPOINT

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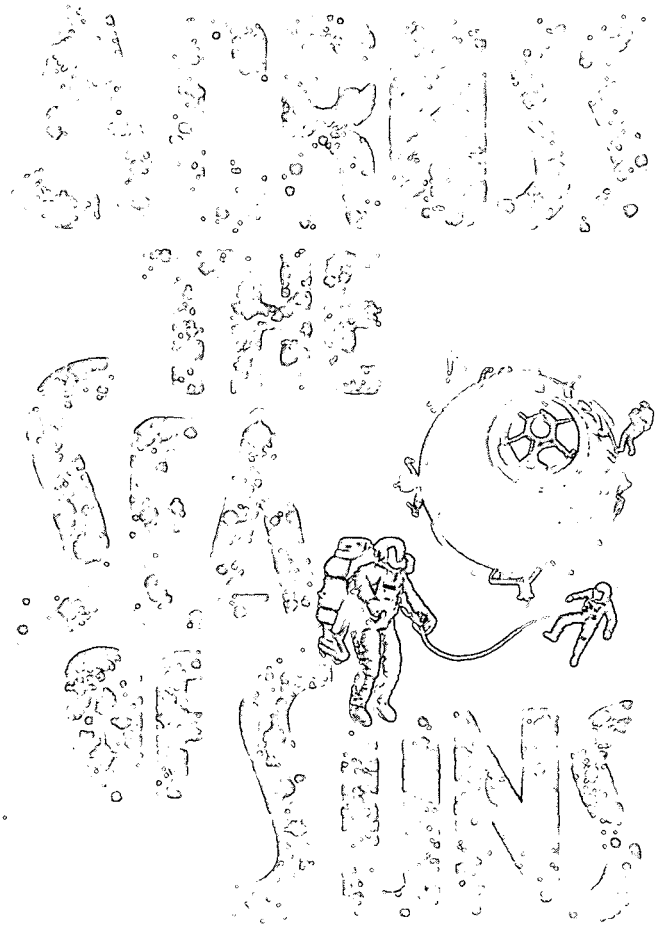

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Vol. 11 No. 8 (whole no. 120)
August 1987
Next issue on sale
July 28, 1987

Novella

142 The Blind Geometer — Kim Stanley Robinson

Novelettes

22 On the Border — Lucius Shepard
102 At the Cross-Time Jaunter's Ball — Alexander Jablokov

Short Stories

82 Cassandra's Photographs — Lisa Goldstein
94 Nutrimancer — Marc Laidlaw
128 The Rose Garden — Steven Popkes

Departments

4 Editorial: Unification — Isaac Asimov
9 Letters
20 Gaming — Matthew J. Costello
62 Viewpoint: The Future of the Jovian System — Gregory Benford
184 On Books — Baird Searles
192 The SF Conventional Calendar — Erwin S. Strauss

Cover art for "On the Border" by J.K. Potter
Poems by Bruce Boston and Robert Frazier

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Published 13 times a year by Davis Publications, Inc. at $2.00 per copy ($2.50 per copy in Canada). Annual subscription of thirteen issues $19.50 in the United States and U.S. possessions. In all other countries $24.20, payable in advance in U.S. funds. Address for subscriptions and all other correspondence about them, P.O. Box 1933, Marion, OH 43305. **If you have questions regarding your subscription call (614) 383-3141.** Address for all editorial matters: Davis Publications, Inc., 380 Lexington Avenue, NY, NY 10017. Isaac Asimov's Science Fiction Magazine® is the registered trademark of Davis Publications, Inc. © 1987 by Davis Publications, Inc., 380 Lexington Ave., New York, NY 10017. All rights reserved, printed in the U.S.A. Protection secured under the Universal and Pan American Copyright Conventions. Reproduction or use of editorial or pictorial content in any manner without express permission is prohibited. All submissions must include a self-addressed, stamped envelope; the publisher assumes no responsibility for unsolicited manuscripts. Second class postage paid at New York, NY, and at additional mailing offices. Canadian third class postage paid at Windsor, Ontario. POSTMASTER, send form 3579 to IAsfm, Box 1933, Marion OH 43306. In Canada return to 625 Monmouth Rd., Windsor, Ontario N8Y3L1. ISSN 0162-2188.

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EDITORIAL

by Isaac Asimov

UNIFICATION

In the November 1986 issue, we published a letter by a reader who objected to portrayals of the future in which the United States a) underwent decay and disintegration, b) was wiped out in a nuclear holocaust, or c) joined a Terran Federation of some sort. He described himself as "a very patriotic American" who wanted to write futuristic stories about a "strong, democratic United States defending our way of life throughout the Galaxy."

I answered briefly in the letter column, but I've been brooding about it ever since, and have decided to take up the matter at greater length.

Is it really necessary to point out the great dramatic possibilities of radical change in present-day society; of the way this would give us a brand-new background against which to portray the foibles and glories of humanity? The writer is using such societies as a tool with which to study the human condition. Using these societies does not mean favoring them, or wanting them, or hoping they come about. On the other hand, to refuse to look at these possibilities is not being "very patriotic"; it is being foolish.

Then, too, it is surely literary madness to write a story set ten thousand years in the future, in which the United States (not Earth) is fighting the battle of goodness and niceness all over the Galaxy, against, we presume, the vicious and mighty army of Nicaragua, which is supporting the oyster-men of Xchulth. What? No change in society on Earth? Then why bother writing science fiction?

The three alternatives presented by the reader, which seem equally unpalatable to him, are not equally unpalatable to me, by the way. I don't want to see the United States decay and disintegrate any more than he does; nor do I want to see it destroyed in a nuclear holocaust. As a matter of fact, I don't want *any* part of humanity to decay, disintegrate, or be destroyed. I don't reserve my benevolence for the United States alone.

But what about the United States joining a Terran Federation or something like that? Is that really something terrible that every patriot should fight?

—Let us look at history, for as

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George Santayana said in 1905, "Those who cannot remember the past are condemned to repeat it."

In the fifth century B.C., the Greek city-states were experiencing a golden age, a glorious time indeed. They were all convinced that Greeks were the master-race, and natural freemen. Everyone else was a barbarian and natural slave. The only catch was that each Greek city-state insisted on independence. Everyone was patriotic. Greece was full of patriotic Athenians, Spartans, Thebans, Corinthians, and so on. There were almost no patriotic Greeks.

The result was that the Greek city-states fought each other endlessly, and would very patriotically never agree to any "Greek federation." The further result was that the Greeks destroyed their own liberties and fell under the domination of first Macedon and then Rome.

Let's switch to Italy of the fifteenth century, which was also living in a golden age of art and literature. All Italians were convinced that only Italians were wonderful, everyone else was crude and barbaric. And they were very patriotic; patriotic Venetians, Florentians, Pisans, Genoese, Neapolitans, and so on. There were virtually no patriotic Italians. The result was that the Italian city-states fought each other endlessly, and would very patriotically never agree to any "Italian federation." They destroyed their liberties and culture and became a battleground

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for the French, Germans, and Spaniards for over three-and-a-half centuries.

Let's switch to Europe of the nineteenth century, which was also living in a golden age of commerce, science, and prosperity. All Europeans were convinced that only Europeans were civilized; everyone else was a "native." But they were very patriotic; patriotic Frenchmen, Germans, British, Russians, Austrians, and so on. There were virtually no patriotic Europeans. The result was that the European nations fought each other endlessly and would very patriotically never agree to any "European federation." So they damaged themselves seriously and now live, fingers in mouths, under the shadow of the superpowers, the United States and the Soviet Union.

Well, then, shall we remember history, or shall we merely repeat it? Are there to be only patriotic Americans, Soviets, Chinese, Iranians, and so on? Are there to be no patriotic Earthmen? Are we to destroy ourselves in the holy name of competing patriotism and, with no nations left to take over, shall we simply resign ourselves to planet-wide destruction?

It might seem so for, as Georg Hegel said in 1832, "What experience and history teach is this—that people and governments never have learned anything from history, or acted on principles deduced from it."

But maybe old Hegel was wrong. Back in 1776, the thirteen British colonies on the east coast of North America agreed upon a Declaration of Independence. It didn't mean anything. Great Britain's army was in the field and the likelihood was that the rebellion would be crushed and all the signers of the Declaration either hanged as traitors or driven into exile.

Even when, against the odds, and with the help of Great Britain's sworn enemy, France, the colonies did win, they didn't actually form a nation, but *thirteen* nations in loose and crumbling alliance. The new nation was filled with patriotic Virginians, and South Carolinians, and New Yorkers, and Rhode Islanders and so on. There were virtually no patriotic Americans.

If this had continued, the states would have quarreled and fought wars with each other endlessly (there were indeed threats of war in the early 1780s). The very loose union would have broken up, different states would have sought alliances with different European nations and I shudder to think what our history would have been like.

But the states got together, and adopted a constitution, that *limited* the sovereign power of the states. They actually accepted an "American Federation," or "Federal Union" as it is properly called, and *that* is the United States. The constitution came into effect on March 4, 1789 and *that* is the birthdate of our nation. Naturally, there were still patriotic states-righters who

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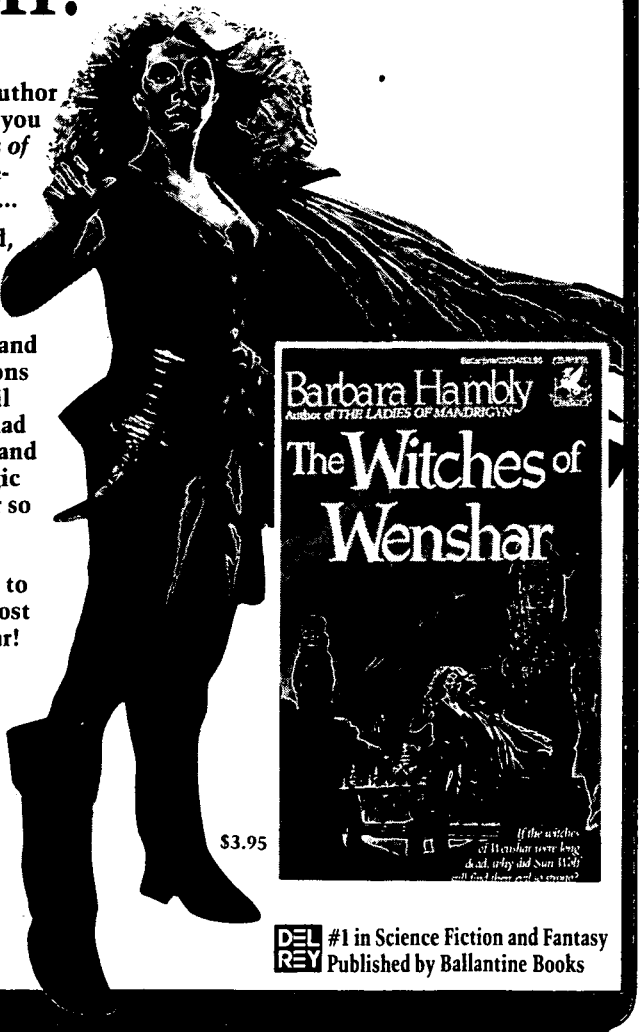

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disapproved of the Federal Union. In 1861, eleven states seceded and there was a four-year civil war to persuade them that they couldn't do that. But the Union held, and it is the Federal people and not the local "patriots" that we have to thank for the United States today.

So what is the precedent we ought to follow now: the Greek city-states, the Italian city-states, the European nations, or our own American states? You tell me.

Come to think of it, it often seems to me that our super-patriots are as suspicious of our own government as of that of the Soviet Union. Presidential candidates run against Washington and campaign on the pledge of getting the government "off the backs of the American people." They want to dismantle "big government" and give power to local government and to "the private sector."

Well, I don't like government, either. I don't want to pay taxes. I don't want government functionaries telling me what to do. I want to be left alone to do exactly what I want. The trouble is I need the *services* of a government. We can't have a complex society without these services. And if we *must* have a government, then I want one in Washington, far away from me.

After all, the people in Washington don't know me much. If I have troublesome views they may not catch on right away and they might leave me alone. They might even treat me nicely out of sheer indifference. But if big government is taken off my back and I have a local government right here—why, they know me, and they keep their eyes on me all the time.

In short, *someone* is going to govern me; either a distant bureaucrat, or the neighborhood bully. And I may be wrong, but I vote for the distant bureaucrat.

Indeed, on many and many an occasion in history, the central government *has* broken down, either through internal decay, or through the onslaught of "barbarians" from without. Replacing the strong central government was a multiplicity of local governments.

Do you know what we call times like that where you get rid of "big government" and distant bureaucrats? We call them "feudal periods." We also call them "dark ages."

Human beings have never enjoyed those periods, and they wouldn't enjoy one now. It seems to me, then, that this "Terran Federation" that science fiction writers sometimes speak about might not be so bad.

What do you think? ●

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LETTERS

Dear Dr. Asimov,

This letter is really directed toward Norman Spinrad, who authored "Science Fiction versus Sci-Fi" in the Mid-December 1986 issue.

I take to task two separate instances of offending the public's (and this particular reader's) sensibilities.

The first is the labeling of *2001: A Space Odyssey* as "Sci-Fi." Spinrad calls "Sci-Fi" bad Science Fiction, including all the stereotypical attributes of BEM's and swooning, barely clothed heroines. To quote: " 'Sci-Fi' . . . has long since become the media's fave label denoting . . . those books festooned with rocketships and BEM's . . . and of course 'sci-fi movies' ranging from *2001* to *King Kong vs. Godzilla*."

How can anyone, much less Spinrad, place *2001* in the same class as pulp literature or "pulp" movies? *2001* is the best example of true SF literatey, conceptually, and visually (sorry, Good Doctor; you're not the best). In fact, many critics and viewers (including myself) believe that this movie is one of the best of all time, never mind the genre. The reason is clear: it uses a reasoned approach to a problem that clearly could exist, and the means by which this is shown include anything but "sci-fi" conventions, and definitely include much artistry, beauty, and speculative science. There is no aspect of the film or book which is not original or short of brilliant. Good literature, including for the moment good films, melds form and substance such that one cannot be separated from the other without damage. Such is the film *2001*. Although fantastic, the ending is reached using sound problem-solving techniques by the author. Clearly, Spinrad is off his nut.

My other objection to his article has to do with sensibility-offending of a different nature. He describes the so-called "Plot Skeleton" (the stereotyped version of commercially viable "Sci-Fi" works) using the sex metaphor. Fine. But he continues to make this metaphor explicit rather than implicit (which points out that he considers his audience rather inferior to himself, so that he feels obligated to spell out his comparison), using such terms as "lest the reader, whom the writer is quite literally mindfucking . . ." Come on, now! Does Spinrad need to use such attention-getting devices just to make a point? Gratuitous obscenities do not an interesting article make. Even if such writers think we, the public, are still trapped in such "backward-thinking" mind-sets,

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obscenities still offend, especially gratuitous ones. There are much finer ways to make a point.

These two points have considerably lowered my estimation of Spinrad as a writer and of *IAsfm* as a superior mag. C'mon, editors: eliminate truly bad "sci-fi"!

Sincerely yours in SF,

Joseph A. Huycke
Phillips, WI

Norman's essays continue to get considerable reader attention, which is a point in their favor. They clearly encourage thought, and this is something to be desired, whether the results of the thinking are favorable or unfavorable to the expressed viewpoint. It is heartbreaking, however, to be told that I'm not the best.

—Isaac Asimov

Dear *IAsfm*:

In response to Patrick McDonald's letter in the November 1986 issue: I'm glad the editorial reply was as pointed as it was.

I, for one, cannot *conceive* of the future with the U.S., in its present state, intact. First, life would be dull, indeed, if things didn't ever change. Second, if the U.S. continues on its present course (and this is purely *my* opinion), things can only get worse (i.e., crime, drug abuse, general societal malaise). I *don't* believe that the "Good Old U.S.A." holds the answer for mankind. I *don't* believe (à la *Candide*) this is the "best of all possible worlds." I believe that *only* by striking the barriers of national borders and by considering this place as a planet, not a bunch of separate little and big places, can we treat Good Old Earth with the respect she and we deserve.

One more thing. Maybe the books that depict America of the future as a "corrupt, inefficient, business/corporation-dominated non-republic" do so because, in effect, the America of the *present is* a corrupt, inefficient, business/ corporation-dominated non-republic.

Sincerely,

Virginia Arouh
3809-A Elkins Avenue
Nashville, TN 37209

I'll tell you what reflects most favorably on the Good Old USA. It is the fact that someone feels free and unafraid to write a letter like this, and that we of this magazine feel free and unafraid to publish it. It is this which makes me glad to be a citizen of the United States no matter how many faults it may have.

—Isaac Asimov

Dear Dr. Asimov and Mr. Dozois,

I sincerely hope that I am correct in addressing *Mr.* Dozois, rather than *Dr.* I have no way of knowing which to use and I do not wish to offend anyone. I was once told by an English instructor that I could call him by his first name, or I could call him Dr. so-and-so, but by God never to call him Mister!

I have a couple of complaints concerning your outstanding magazine (and of course, from where I'm sitting it's easy to be critical), but because you probably have only enough space to address one issue I'll mention the most important.

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Has there been some shift in your attitude towards science fiction poetry? (This, by the way, has nothing to do with those silly rejection slips you keep sending me.) It seems that I'm seeing less poetry in each new issue. I have always enjoyed the poetry in *IAsfm*. In fact, I prefer it to the Gaming department, which I'm sure attracts many other readers and is very well written.

I am eager to hear from you on this matter, and I hope that my fears are unfounded. I also hope that 1987 is being good to you and to all the other wonderful people at Davis Publications.

Scott A. Kelly
Bethany, OK

I suppose it is courteous to address one by the highest legitimate honorific, but I, for one, do not put much store by it. I can legitimately be called "Professor" or "Doctor" but I answer to "Mister" or to "Isaac" with complete equanimity. People who want something of me are always suspiciously deferential, and those who don't are welcome to be informal, provided they don't object to informality in return. As for poetry, I'll leave that answer to Gardner or Sheila, if they so wish.

—Isaac Asimov

Our use of poetry has always been unpredictable. It depends on the space available in the magazine, and is never published at the expense of a piece of fiction. As always, we have several fine poems in our inventory, and we will continue to place them in IAsfm *whenever we can.*

—Sheila Williams

Dear Dr. Asimov:

Sorry to start with a nit-pick, but Lord of the Rings is not a series. It is a single novel in six books that gets packed into three volumes for purely physical reasons. (I haven't the reference to hand, but I think that none of the three volume names are the names of JRRT's six books.) The volumes don't stand alone because they're each two-sixths of a single novel.

And let's put it on record, this reader would rather you had gone on holding out. Face it: you are no longer the youngster who wrote the Foundation series, nor is this the world that inspired it. Whatever the years may have supplied in experience and knowledge, the new books are, shall I say, not entirely congruent.

Sorrier still to have to call you for a *non sequitur*, but the gender of "James Tiptree, Jr." has nothing to do with whether s/he is a male chauvinist. There are plenty of male chauvinist sows around, Phil Shoo-fly being perhaps the most notorious.

Nor does a writer's personal liberation have anything to do with the liberation status of his/her writing. Time and again, I hear a certain woman's writing (not JT, Jr.'s) defended with how liberated she is.

This is none of my concern, nor that of the various defenders. The question is her stories, which are loaded with dead and hacked-over stereotypes.

And that, of course, is what feminist criticism is all about. Our much-vaunted literature of ideas is hagridden by stereotypes, and editors who periodically tell writ-

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ers not to do Adam-and-Eve stories, or computer-dream stories or whatever, insist that they must not tell writers not to be satisfied with dead stereotypes because they "shouldn't tell people how to write." Isn't that precisely what Campbell did, back in the days of the SF revolution named for him?

Spinrad is being a pompous bore. How long does it take to say that intelligent readers don't like Series Regular Syndrome, and find the template-series generally no more than ephemera? (My generation is showing. I think in terms of TV shows instead of pulp stories. Same difference.)

And by-the-by: is he deliberately restricting himself to novels, or does he just not realize that short stories run from low pulp clear to high drama? Plenty of all he asks for—along with tons of message-mongering, Sturgeon's Revelation holding true as always—is in that bastion of hard SF, *A****g*.

Ah, yes, the stories: A pleasant few hours.

Sincerely,

Lee Burwasser
Hyattsville, MD

I also wish I had gone on holding out, but I just couldn't bear to disappoint Doubleday year after year after year. To be sure, these novels of the 1980s have greatly increased my assets, but you and I despise money so that's no argument. Incidentally, why does it bother you that my new books are "not entirely congruent"? Since I am no longer the youngster I once was, nor is the world what it once was, why do you either want or expect congruence?

—Isaac Asimov

To the Editor:

Will someone please pull Mr. Spinrad's coattails and whisper to him that he may have revealed more about himself than about Orson Scott Card's *Ender's Game* in that remarkable analysis published in the Mid-December issue? How did he ever miss the obvious mother/nurturer role in his Freudian analysis: Valentine as Ender's protector was superior to their parents.

Mr. Spinrad's analysis appears to use the adolescent behavior of the children, Ender and his sister Valentine, as his point of departure. He observes, correctly, that their behavior is asexual, unusual for adolescents. He then finds an incestual(!) basis for the asexual(!) behavior. In the absence of sex, how can there be incest?

May I point out that while "asexual" and "adolescent" are contradictory terms in normal children, Ender and Valentine are hardly normal. In fact, Card's children are geniuses. They reason and think as do people who are much older than they. Given that, it is scarcely unusual that their vocabulary and speech patterns reflect their mental development, while their physical development is that of normal asexual pre-adolescents.

I think Mr. Spinrad missed Card's point: society takes its geniuses and uses or abuses them. At no time is the recognized genius, Ender, asked if there is a better solution. The adults have decided that there is one and only one solution, and that the resident genius, at whatever cost to himself, had damned well better do what he is ordered to do.

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Ender is an object of envy simply because he is what he is. An accident of birth gives him a superiority which he does not flaunt but in which others less gifted see reflected their own unbearable inferiority. No placatory behavior by him will satisfy the envious. Don't the murderous attacks reflect the way we treat our geniuses?

This seems so obvious to me. Once Mr. Spinrad's premise is demonstrated to be flawed, the rest of the analysis fails. I'm not defending the selection of *Ender's Game* as the Hugo winner. I personally thought Cherryh's *Cuckoo's Egg* was equally as good.

Mr. Spinrad also appears to believe that if the hero don't die, it ain't literature! And if it's popular, it ain't literature! Well, it is what was "popular" to the Greeks that has set our standards of literature. I do object to this ranting on about "literature" in the Classic Greek mold. Those Greeks had their standards. They are dead. We have evolved in ways that make those standards so terribly limiting.

Aeronita C. (Tes) Belle
4723 Maryknoll Rd.
Baltimore, MD 21208

I like your sentence: "An accident of birth gives him a superiority which he does not flaunt but in which others less gifted see reflected their own unbearable inferiority." By an odd coincidence, this, or something like this, is exactly what I have been saying for lo, these many decades whenever some jerk gives one of my books (or all of them) an unfavorable review. Of course, I may be wrong.

—Isaac Asimov

Dear Gardner,

I think the August and September issues of *IAsfm* were your strongest yet, particularly Shepard, Card, Martin, and Weiner. Bob Frazier's "A Worker in the Ruins of Ganymede" is one of the best SF poems I've read this year, a bit of future naturalism expertly rendered.

Best,

Bruce Boston
Berkeley, CA

Thank you. Your letter is short and favorable. There are always some readers who think that I deliberately choose adulatory letters to print, and I lean over backward to avoid that. However, I trust these harsh critics will allow me an occasional pleasant one.

—Isaac Asimov

Mr. Dozois:

Please tell me how to pronounce "Dozois." And, if it is pronounceable, Sucharitkul also.

Thank you.

Gordon Muma
Route 2, Box 310
Rigby, ID 83442

Gardner Dozois pronounces his name French-fashion, "duh-ZWAH." As to Somtow, I pronounce his name "soo-chu-RIT-kul" and I believe that is correct. Am I correct in supposing that your name is pronounced MOO-muh?

—Isaac Asimov

Dear Dr. Asimov:

As a postscript to the letter from Fred Podealuk (December 1986),

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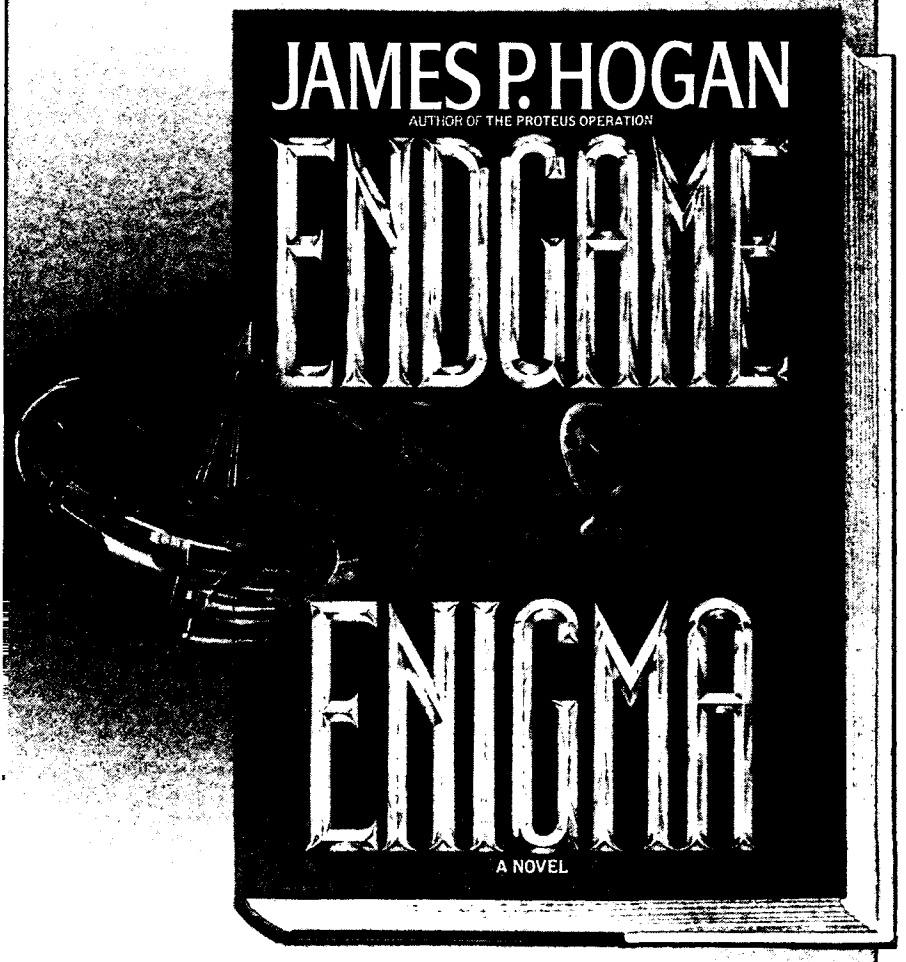
HOGAN'S DONE IT AGAIN!



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he asked, "Does anyone, anywhere, really think that anyone, at any time, buys *IAsfm* because of the silly little yellow triangle that boldly proclaims that the magazine contains 192 pages?"

Well, Fred, if they did they could sue for misleading advertising!

Yes—there are 192 pages in the magazine. However, included in that 192 pages are 17 full-page ads, not to mention the ads on the inside of both covers.

Now, there is nothing wrong with a magazine running ads. But to proclaim loudly on your front cover that you have x number of pages morally requires that you only count those pages which bring enjoyment to your readers. You could have a thousand-page magazine, if your ad salesperson were a genius, and still only give your readers 175 pages of fact, fiction, and reviews! Would you still write on your cover "1,000 pages"? That first story, "Windows," had so many full-page ads, I kept thinking I had come to the end of the story and the ad was the title page of the next story!

Sell your ads—everyone does—but don't brag about how many pages you have, on your front cover!

Sincerely,

Lydia Palmer
West Hartford, CT

I'm sorry, Ms. Palmer, but please dilute your indignation. We don't say "192 pages of fiction," we say, simply, "192 pages," which is absolutely true. Furthermore, the advertisements are not there simply to irritate you. They carry information which may interest many of our readers. For the most part, they advertise science fiction books which our readers may wish to know about, and they thus serve an important function.

—Isaac Asimov

Dear Dr. Asimov:

It was with great interest that I read the critique of science fiction in the November 21 edition of *The Wall Street Journal*. I noticed that even Gardner Dozois was quoted! The review of "Cyberpunk" literature was quite favorable, although I disagree with Mr. Jennings' sixth paragraph: ". . . the genre has for decades depended on ideas that became bankrupt in the 1940s . . ." Frankly, I don't think he has read any good SF lately (other than Cyberpunk) if he believes that Cyberpunk is the only alternative to "space pirate" type SF.

However, on to meatier questions. Does this favorable review, in a fairly conservative press, mean that science fiction is gaining respectability with the "establishment"? Does this mean that I won't be the only one in a gray flannel suit reading your magazine during my morning commute? And, having once reached the lofty heights of literary acceptability, will SF authors play it safe, causing SF to lose some of its charm and daring? I would very much enjoy reading your reaction to the article and to its implications (if you think there are any).

I would also like to take this opportunity to thank you for several years of pleasurable reading. I like the diversity of stories selected; I have sampled many I probably

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would not otherwise have tried and enjoyed most of them. Furthermore, I find the size (and binding) of your magazine most convenient: it is small enough to tuck into a briefcase or a diaper bag and it's small enough and light enough to hold while hanging on in a bus or while nursing a child! (My children are literally absorbing SF through their pores.) The only improvement I can think of is more George and Azazel and more Pshrinks Anonymous stories!
Regards,

Denise L. Barney
Pinole, CA

As far as I am concerned, science fiction has always been respectable. As for being respectable to the "establishment," who cares? And what does "literary acceptability" mean? The opinion of some particular stuffed-shirt critic? Nor do I take buzz-words seriously. I remember the "New Wave" which was going to make everything else obsolete. Now it's "Cyberpunk." Next year it will be "Lollipop" for all I know. Science fiction comes in many varieties, and different people like different things, and that suits me.

—Isaac Asimov

Dear Editor,

I would like to respond, if I could, to Norman Spinrad's comments on Orson Scott Card's book, *Ender's Game*.

I read *Ender's Game* on the recommendation of my son who is a fan of Mr. Card. I am an occasional science fiction reader, but I am not as familiar with the field as my

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son. However, I am skilled in one area—an area Mr. Spinrad also seems skilled in, if accidentally so. I am a child psychologist and former secondary education teacher, and I am most specialized in the area of teaching gifted children.

Mr. Spinrad's article—at least the part about *Ender's Game*—was startlingly accurate, but Mr. Spinrad did not go as far as he might have in indicting Card's depiction of "gifted" children or genius-level children.

My son tells me that Card won a Nebula and a Hugo award for *Ender's Game*, and I cannot understand why. Moreover, I am surprised that no one has criticized it in a manner similar to Mr. Spinrad's. Card's book is highly inaccurate in depicting children and their behavior, *especially* children so advanced. Card merely seemed to assume in *Ender's Game* that if one simply says that a child is a genius, such as Andrew Wiggen, then that gives the author license to do anything he wants with that characterization.

Mr. Card depicted his children in *Ender's Game*—I should say his characters—in a way more appropriate to immature adults. I can assure Mr. Card that advanced six-year-olds do not speak and think and feel as Andrew Wiggen did in *Ender's Game*, and I found the book an enormous exercise in audience manipulation and wish-fulfillment. Gifted children, while advanced in certain areas, rarely act as wise adults, as they did in *Ender's Game*. Card also assumes that children are wild barbarians and constantly do harm to one another and down deep want to do harm to the adult world.

Tell Mr. Spinrad that he should be congratulated for writing such an unusual critique of *Ender's Game*. If *Ender's Game* is a good example of Card's writing, then I will avoid it in the future.

Yours truly,

Ann Mills
Corvallis, OR

I like your point, Ms. Mills, about gifted children. Several centuries ago, I was a gifted child in a mild sort of way and I remember myself well. I was a child, *with only a child's accumulation of experience. The "gifted" part meant only that I had a quick understanding and a near-perfect memory, but that only made me obnoxious and did not add one whit to my good sense.*
—Isaac Asimov

AN OPEN CALL

For years science fiction writers have predicted that the plain, ordinary book would be replaced by some fancy "viewer" or reading machine. This has not happened, despite the advent of motion pictures, radio, television, and now the personal computer. Book sales are flourishing more than ever. Books are not just toys, either; textbooks are still the most widely used educational aid, and reference books are still the most widely used sources of information for scholars. There is no noticeable downward trend. Why are books holding out so well against high tech devices?

I am conducting an informal, unstructured poll on this subject, and I want to hear from as many people as possible. You may write me and say whatever you wish on this sub-

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ject. If you need something to trigger your thinking, here are some questions that occur to me:

Will that ink-stained piece of wood pulp disappear? Why? If you were to have a book-sized electronic reader with plug-in chips which can call up text to a screen which is as easy to read as a clean piece of white paper, how would this device be different from a book which is printed on paper? Would it be more useful or convenient? How? Would a book printed on paper be less useful? How? Do you like the thought of the book being replaced by such a device? Why?

I am sorry, but I am on a shoestring budget and I cannot guarantee an acknowledgment of your response unless you enclose a stamped, self-addressed envelope. But your response will be appreciated, and if there is such an envelope I will try to write a personal reply.

Bennett Sawey
308 Merritt Street
South Boston, Virginia 24592

I find this an interesting question that should be of interest to SF readers. In fact, I once wrote an essay on the subject (pro-book) called "The Ancient and the Ultimate," which appeared in my collection The Tragedy of the Moon *(Doubleday, 1973; Dell, 1978).*

—Isaac Asimov

ISAAC ASIMOV'S SCIENCE FICTION

CONGRATULATES THE WINNERS OF THE 1986 NEBULA AWARDS

given by the Science Fiction Writers of America

Best Novel
Speaker for the Dead
by Orson Scott Card

Best Short Story
"Tangents"
by Greg Bear

Best Novella
"R&R"
by Lucius Shepard
(IAsfm, April 1986)

Best Novelette
"The Girl Who Fell Into the Sky"
by Kate Wilhelm
(IAsfm, October 1986)

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GAMING

by Matthew J. Costello

Raise your hands if you haven't seen *Aliens*.

Okay, all of you go out and rent a tape, watch it, and report back here *prontissimo*.

All set? Good.

As a heavy-duty admirer of *Alien*, it was my good fortune to land a nifty assignment interviewing the creative team of *Aliens*. I felt that the film was doomed to disappoint. After all, *Alien* was pretty outrageous. The tension just never let up.

But, with James Cameron, the director of *The Terminator*, filming *Aliens* there was hope for some sparks.

Then I went to the preview screening. I had asked the producer, Gale Anne Hurd, if *Aliens* had the same relentless quality of *The Terminator*. She answered (with absolute conviction) that *Aliens* was "relentlessness-cubed." Sure, I thought. Then I sat back and proceeded to wear down the edge of my seat.

Slow moving it wasn't.

Now, most tie-in games have been disappointing, dating back to the first *Indiana Jones* games for Atari. But Activision acquired *Aliens* (2350 Bayshore Parkway, Mountain View, CA 94043; $34.95), and designer Steve Cartwright produced a winner.

The game is actually six games, all entertaining and corresponding to key moments in the film. It begins with a suitably dramatic display of dialogue between Ripley (Sigourney Weaver's lone survivor from *Alien*) and the uncomprehending authorities on the space station. Then, there's a switch to a colorful illustration of Ripley explaining to some marines what they are about to face on the planet.

Just another "bug hunt," they respond, unimpressed.

Then the first game sequence begins with a bang, a wild landing on the planet requiring you to navigate your landing vehicle through a dizzying spiral of hoops. The music seems to pick up momentum with the speed of the targeting hoops, and it's mighty hard to stay cool through the whole sequence. I got so close some times, and then just fell apart right near the end.

When you successfully complete the landing, you move into the second, most entertaining game. There are four marines in the Atmos-

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pheric Processing Center, checking for survivors, and then trying to make their way back to the Armored Personnel Carrier (APC). The player is in the landing vehicle, monitoring each man's life signals as well as the presence of any intruders. Soon, one of the monitors flashes, and you quickly bring that man on the screen and watch him facing a horde of Aliens.

Now this wouldn't be such a tough exercise if there weren't so many of them, coming from every direction. And then, when you have things in hand, another red light flashes, and more of the irrepressible creatures are after a marine.

In both mood and tension, the sequence beautifully captures the scene from the film.

Next, the player is a lone marine trying to hold off the Aliens while the other marines try to cut a hole through a door to escape. Lots of luck on this one. The Aliens drop from the ceiling, their nifty mouth parts protruding out, and are overwhelming.

Assuming you have any marines left at this point, you enter the Air Duct Maze. Essentially Pac-Monster in space, the object here is to learn the scrolling maze and guide Ripley and Newt, the young survivor, out to the drop ship area.

Of course, in the film, Newt is captured. And in the next sequence, as in the film, Ripley has to race the clock and explosives she set to get the small girl out of the Queen Alien's nest.

Fortunately you have a range meter which tells you how far you are from Newt. But getting there in time, with enough ammo left to keep the Aliens at bay, is deliciously difficult.

Last, there is the Power Loader sequence. Ripley dons the massive fork-lift outfit to battle the "bitch," as she calls the mommie Alien. This game sequence begins with the dynamite sound effect of a shaft opening to have you face the frenzied Queen Alien. The amazing thing about this game is that you have to bang the Queen Alien around, tiring it, before grabbing it and attempting to throw it down the shaft out of the ship.

Except that it's unbelievably exhausting operating your computerized power loader in hand-to-hand combat. So it's really a question of who tires first, you or the Queen Alien, ready to plunge its slimy maw into your body.

If there's anything like real value for money spent in the computer game field, this game is it. And, in a nice bow to human frailty, you can skip ahead to any of the game sequences you choose.

So, pop the sound track tape into your Walkman, load *Aliens*, and get ready for one of the truly great game experiences of your life. ●

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Chapo, handsome twenty-three-year-old, with Aztec features, black hair, adobe-colored skin. He sat on the cantina steps gazing up at the unreal fire of the border: a curtain of shimmering blood-red energy that appeared to rise halfway to the stars before merging with the night sky. So bright you could see it for miles out on the desert, a glowing seam stretching from Texas to California, and in that seam were the old towns of Tiajuana, Nuevo Laredo, Mexicali, and a dozen more, all welded into a single town of stucco bars and slums, of muzzle gleam and knife-flash, of paunchy whores and sleazy pimps and gringos on the slide from the fatlands of America: the Crust, they called it. Chapo liked thinking of himself as part of that glow, that red meanness. At least that had been the case until three days before, when he had crossed over and come back with the gringa.

Now he wasn't sure what he liked.

Somebody heaved a bottle toward the border, and Chapo tracked the arc. Violet lightnings forked away from the impact point. Throw a man into it, and you got brighter colors but the same result.

Zap!

Not even ashes.

Chapo fingered an upper from his pocket and swallowed it dry. He picked up his mesh shopping bag and headed for home. Music poured from the bars, swaying his hips, setting his fists jumping in little karate strikes. Battered old 1990s rides rumbled past, dark heads behind the wheels. Tang of marijuana, stink of fried grease. The red light shone everywhere, and shadows were sharp like they would be in Hell.

A crowd was gathered by the door of Echevarria's bar, which meant a country girl was riding the wire. The child some farmer didn't have enough money to feed, and so he'd sold her to Echevarria. A brown-skinned girl stripped naked, silver electrodes plugged to her temples. Her brains frying in a smoke of pleasure as she danced a herky-jerky path across the floor, and men touching her, laughing as she looked blindly around, trying to find them. Later when she slowed down, they'd take her upstairs and charge heavy for a short time. If he'd been smart, Chapo thought, he'd have sold the gringa to Echevarria. But the wire . . . that was where he stopped being part of the red glow. He knew he could never hand her over to that fate.

A poster with the gringa's photograph was plastered to Echevarria's wall. Blond hair and angel face. It didn't do her justice, didn't show how her eyes were. At first glance they were blue, then green, and then you saw they were all colors like fire opals, with flecks of emerald and gold and hazel. Special eyes. Beneath the photograph, big black letters spelled out her name: Anise. Just like a gringa to be named for something you drink. Even bigger letters offered a twenty-five thousand dollar reward.

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Everybody was looking for her now, and no way Chapo would be able to move her until things calmed down.

"Hey, Chapo!" Rafael pushed out of the crowd and came up beside him. Big chubby guy with jowls and brown frizzy hair. He was always hassling Chapo, not for any real reason, just for something to do. "You oughta see inside, man!" he said. "They gotta sweet little lady ridin' tonight!"

"Fuck it!" Chapo popped another upper. "I don't go for that shit."

"Least she gonna have fun," said Rafael, and grinned. "Least she goin' fast . . . not slow like you." He pointed to Chapo's shirt pocket, his pills.

A flash of chemical fury, and Chapo knocked him back with a slap. Rafael rubbed his mouth, and a knife materialized in his hand. "Okay," he said. "You like it fast? You got it, man."

Everybody was staring, wanting it to happen, and the pressure of all those black eyes made Chapo feel a little loose, a little casual about his life. He started to go for his own knife, but thought about the gringa and held back.

"C'mon, man!" said Rafael, dancing back and forth. "C'mon!"

"Maybe later," Chapo said.

Jeering whistles sounded behind him.

"What's the matter, Chapo?" Rafael grinned and made passes with the knife, lunging close.

Chapo half-turned, then swung his shopping bag, heavy with cans of fruit juice; the bag struck Rafael in the jaw, and he came all unhinged, falling face down in the dirt.

The whistles broke off, and as the crowd dispersed, laughing, a couple of them stopped to spit on Rafael.

Out on the edge of the desert, the edge of the Crust, that's where Chapo lived. A white stucco ruin with no windows, no doors. Inside, he waited a minute to make sure nobody had followed. Each of the window frames held a rectangle of golden stars and blue darkness.

When he was certain he was alone, he went into the back room. It was piled with rubble. He kneeled and knocked three times on the floor. Waited another minute. Then he lifted a heap of rubble that was glued to a round metal plate almost the size of a manhole cover. Lowered a rope ladder that had been concealed beneath the rubble. He climbed partway down, eased the metal plate back into place. "Okay," he said, climbing down the rest of the way.

A match scraped, a candle flared. Two candles. He made her out against the rear wall, sitting on a stained mattress, her legs tucked under her. Grime streaked her face, and her golden hair was getting stringy. She wore jeans and a torn white blouse.

"Got you some fruit," he said, holding up the shopping bag. "Juice."

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She didn't appear to register what he'd said. The hollows in her cheeks had deepened, making her look older . . . with that wide mouth, like a model in some fashion magazine. But he figured she wasn't much over eighteen. Nineteen, maybe.

He set the shopping bag beside her and sat a couple of feet away. The candles cast tiny dancing shadows on the dirt. Dark wings fluttered behind his eyes, making the room dimmer: the uppers playing tricks.

"Please," she said wearily. "Won't you help me?"

"That's what I'm doin'," he said.

"No, I mean won't you help me get back." Her voice broke, and he hoped she wasn't going to cry again.

"I keep tellin' you," he said. "Your papa's offerin' too much money. There's guys lookin' for you all over. They see some fat ol' lady, and they go peekin' under her dress to see if the fat's for real. We'd never make it to Immigration. And you know what happens if somebody catch you? They gonna tease you, touch you . . . touch you here." He tapped his chest. "And then they say, 'Hey, why don't we taste some of that 'fore we score the money.' And once they start, they'll give everybody a taste, and pretty soon there won't be enough left to be worth the reward. That's how it goes in the Crust. People don't think ahead."

"We could call the police," she said. "We . . ."

"The police! Shit! They even worse. They hold you a while to jack up the reward. Maybe they send your papa a finger or somethin'. And when they get the money, they do you the same way. You be patient, and I'll get you out."

She stared at him a moment, hopelessness in her face. Then she reached for the shopping bag.

Sitting hunkered on the dirt floor of the cellar, gazing into nowhere, Chapo thought about the crossing. He'd been wanting to cross a long time, wanting some of that Stateside money. And Moro had given him a chance. Moro had owned one of the tubes that spat threads of light and punched holes in the red glow. Holes that spread to door-size, lasted a few seconds and then closed tight. In a single night they had stolen more money than Chapo had ever seen, and as they'd headed back to the crossing point, they'd seen the girl through a storeroom window, bound and gagged, lying on the floor. She'd been kidnapped by one of the Stateside gangs, and they were working out ransom with her rich papa. Moro had said to take her. At the crossing point, Chapo and the girl had gone through first. They'd squatted beside a dumpster, waiting for the others. But the others hadn't come through. Chapo had thought he heard a scream, but it had been hard to tell what with the hum and sizzle of the border so loud. Realizing the others were never going to show, he'd

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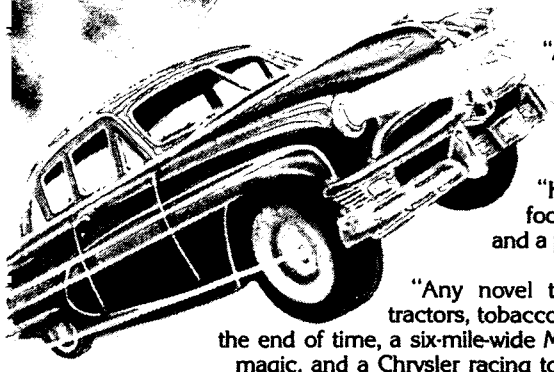

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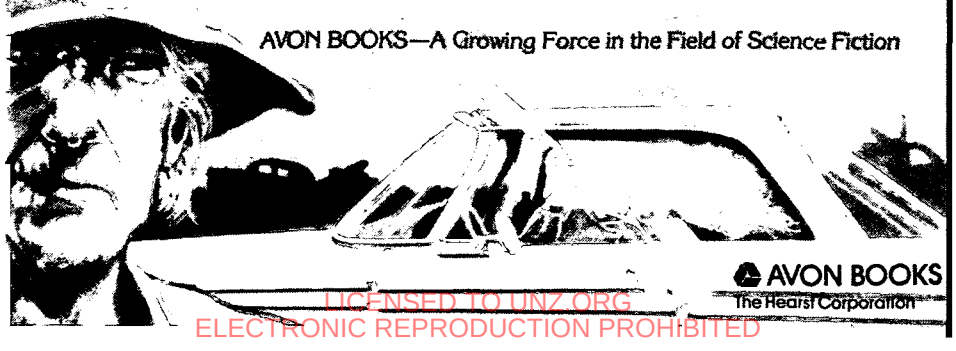

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dragged the gringa to her feet and they'd made a run to Chapo's house. It had been almost dawn, the streets empty, and they'd been lucky to make it even then.

"Chapo?"

And maybe he *should* sell her. What the hell was he doing helping her? If things were reversed, she wouldn't help him. He was just a beaner to her. Just trash.

"Chapo!"

He looked up. She was smiling: it was a fake smile, but he was glad to see it. "Yeah?"

"I'm sorry," she said. "I know you're trying to help. It's just . . . I'm scared, y'know."

Chapo made a noncommittal noise.

"You can sit over here if you want." She patted the mattress.

"I'm okay."

"You can't be comfortable," she said. "Come on, please. It'll make me feel better."

"All right." He crawled over to the mattress and sat on the very end. She gave a teasing laugh, told him he could sit closer, and kept talking.

Three days without a shower, and she still smelled sweet. Out of the corner of his eye he peeked at the tented-up silver of her blouse. Her breasts weren't very big, but he could tell they had a nice shape. He could stand a taste himself. They said it was all the same, but she'd feel different. Her body full of lazy afternoons and expensive sugars. Plush and springy, a Cadillac ride. He'd sink forever into blond flesh.

She edged a little nearer, saying she was cold, and he knew what she was doing, what was going to happen. Then her face was close to his, lips parted, dazed looking, and she said, "Oh, Chapo . . . Chapo!" And her tongue was darting into his mouth, and his hand cupped the underside of one of those breasts . . . Soft. The kind of softness that makes you dizzy, tipped with its little hard candy.

Like a fool, he pushed her away.

"We can do this," he said, his breath coming hard. "We can do this, but I ain't gonna take you out 'fore I think it's safe."

Disappointment and humiliation flooded her face.

What was the matter with him? Why didn't he just grab her and peel off the shell and pluck out the meat. That's what he wanted. But maybe not, maybe with her he wanted it real. Something he could never have. "You gotta be patient," he said.

"Patient!" She spat out the word. "For how long? Until you find some way to use me?"

He got angry, then. "What you think? You think I couldn't make money off you now? Dumbass bitch! I take you down to Avenida Juarez tonight,

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if that's what you think. Sell your skinny butt 'til it's wore down to gristle."

She aimed a slap at him, but he caught her wrist and shoved her away. She scooted to the end of the mattress, waiting for him to attack. For a second, he thought he might. But all he did was to repeat, "You gotta be patient."

"How long?" she asked, looking hopeless again.

"I dunno. A few weeks . . . that is, if your papa don't raise the reward."

"A few weeks." In her mouth it sounded like forever.

He couldn't figure why he wanted to save her. It might be he just wanted to save *something*, to see if anything *could* be saved. But that wasn't all of it. Trouble with words, they shrank your ideas to fit, and made you think they were what you'd meant.

She turned her face to the wall, curled up tight.

Chapo doubted she could last a few more weeks. One day she'd do something crazy, try for the border on her own. He could tie her up, drug her. But she'd get loose. Even though she cried, he could see she was strong. But her strength wasn't the kind that counted here in the Crust.

"Maybe there's a way," he said.

She didn't react. Probably didn't believe him.

"I'll check it out tomorrow," he said.

She mumbled something that he didn't catch.

What a goddamn fool he was!

He didn't want to sleep, so he did another upper. Something scrabbled in the shadows, then was still. The candles guttered low, and light seemed to be collecting around the gringa, burying her under a heap of yellow glow like an enchantment. Her breath deepened. Now and again she moaned. He studied the way the denim clung to her ass. Sleek, perfect curves. An ass Made in America. Chapo wondered what it had cost, what secrets had gone into the manufacture. And he wondered, too, what dreams were crowding that golden head. Even her nightmares would be beautiful.

The upper kicked in, and Chapo leaned back against the wall, feeling the crazy bounces of his heart, a mean wash of thoughts seeping up from the red glow of his blood.

Anise, he said to himself. What a stupid fuckin' name!

Like Chapo, Herreira lived on the backside of the Crust. An old, old man with sheet iron over his windows and big locks on his doors. He owed Chapo, owed him big. Two years before, a merchant named Ibanez had taken Herreira's granddaughter in exchange for paper he held on him, and Herreira had asked Chapo to steal the paper, so his granddaughter could get free. They hadn't talked price, but Chapo had trusted

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Herreira to work something out. He'd broken into Ibanez's house, and Ibanez had caught him. Chapo had opened the merchant's belly with a knife. Afterward he hadn't been able to put a price on the man's life, and he'd told Herreira that sooner or later he'd need something. Now the time had come, and he needed the old man's jeep, his maps of the desert. He'd drive the gringa across the desert to the Pacific resort of Huayacuatia. There she'd be safe.

Herreira's face was as wrinkled as tree bark, and his hair was wispy and white. But his back was unbowed, his black eyes clear. He didn't much care to risk his jeep, but a bargain was a bargain, and besides, he didn't use it anymore. It was painted white to blend in with the hardpan of the desert, and was kept in an adobe building barnacled onto the rear of the old man's house. Herreira spread his maps on the hood and showed Chapo the hiding places, how he would have to drive during the night, and by day hide the jeep and sleep in the big rocks that stuck up from the desert floor. Herreira had once been a smuggler, bringing guns from the coast into the Crust, and he told Chapo it was very dangerous to make the crossing.

"They spot you, man, and that's it." He drew a finger across his throat. "You got no place to run. It's luck if you make it, and the odds ain't good."

"What are they?" Chapo asked.

"Sixty-forty, your favor. If there's no moon, a little better. But there'll be a moon for you."

Chapo studied the map. The border was a crooked red line, and he imagined himself living there like a roach in a crack. Sixty-forty odds. It seemed no worse than what he usually faced.

"How 'bout gas?"

"You gotta extra tank," said Herreira. "Enough to cross the desert. Three nights drivin'. But you'll need more when you head up into the hills. There's a village"—he pointed—"here. San Juan de la Fiebra. Know 'bout it?"

Chapo nodded.

"Well, you can deal with 'em . . . sometimes. You get past 'em, and it's only a few hours to Huayacuatia."

Again Chapo wondered why the hell he was doing this. It didn't feel smart or even the good kind of reckless. But he pushed the question aside. Why didn't matter. He was committed, and maybe it was just in him to do.

"Bring the jeep back," said Herreira, dead-serious. "Don't sell it if you get across."

"How you know I'm plannin' to come back?"

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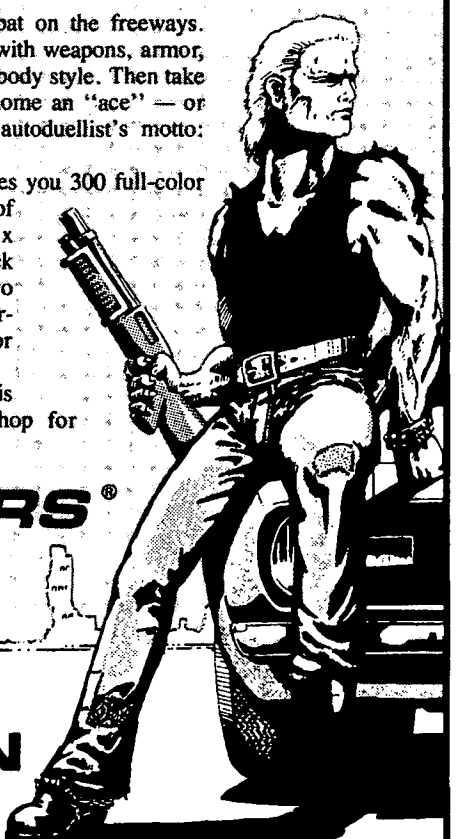

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Herreira's laugh was sneering. "Shit, Chapo! Where you gonna go? You just like me, you border meat."

"Maybe," said Chapo.

"Maybe, my ass!" Herreira scowled at Chapo. "You bring that bitch back."

The first night.

They drove south from the border. The hardpan glowed white. Every once in a while they passed huge desert rocks, indigo under the moonlight, smooth depressions in their sides like dimples made by the pressure of enormous thumbs. The shadows of smaller things—stubby cacti and little rocks—were so deep and black, they hid the objects that cast them. Chapo was tense. He could feel the blazing pinpricks of the stars on his back. The engine noise and rattles were too loud for talk, and whenever the gringa wanted to stop and pee, she had to shout. Sometimes he'd catch her looking at him, and she would smile. Not a fake smile, but one that seemed to be trying to engage him, to give him encouragement, to say something friendly, and he would nod in response and think about the smile, and then his thoughts would be worn down by the engine noise, and he would just drive.

Hours like that.

An hour before dawn he came to the first hiding place, a mountainous rock that showed chalky pink under the brightening sky. There was a niche in the southern face large enough to hold the jeep, and after parking it there, he covered it with brush. They crawled up to a depression, almost a cave, from which they had a good view south and east. The gringa was excited and wanted to talk, but Chapo told her to sleep. Later, he said, it might be too hot to sleep. She drank a little water, chewed half a tortilla and wrapped herself in a blanket. He had bought her a clean blouse—blue, with a pattern of white hibiscus—and when she turned in her sleep and the blanket slipped down from her shoulders, he could see her nipples pushing up the clingy material. He watched them rise and fall, not thinking, just watching, feeling mild arousal, until he began to get drowsy.

When he waked, he couldn't remember having fallen asleep. Sweat was crawling down his sides, and the desert was rippling with heat haze; he thought he could hear the heat humming, but the sound was in his head, and after a second it switched off. At the base of the rock stood a green barrel cactus. He could have sworn it hadn't been there when he'd parked the jeep. There were supposed to be brujos in the desert: could be the cactus was one of them in disguise. He glanced around and found the gringa watching him.

"Good morning," she said cheerfully.

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Her good spirits annoyed him. "Yeah, mornin'."

His mouth tasted like shit. He did an upper and washed it down with a sip of water from the canteen. Shook his head to clear away the cobwebs. He reached into his hip pocket and pulled out his wristwatch. It was nearly one o'clock. Six, maybe seven more hours of daylight. He wished he'd slept longer. That same old question of what he was doing here cropped up in his mind: the desert seemed a bad answer.

"Want something to eat?" she asked.

"Un-uh."

His automatic jabbed into his back; he reached behind him and eased it from his waistband, laid it beside his leg.

The gringa's eyes widened, but she made no comment. After a minute she said, "Do you wanna talk or something?"

"What for?"

"Just to pass the time."

He had another sip of water. "Yeah, sure . . . all right."

She waited for him to start, and when he didn't, she said, "Why didn't you think of this before? The jeep, I mean. It doesn't look like it's going to be too hard."

He didn't want to tell her what Herreira had said about the odds. "I dunno."

"Well," she said impatiently. "I'm glad you *did* think of it."

They were silent for a while, and then she said, "What do you want to be?"

"Huh?"

"What do you want to do with your life? I'm studying to be a dancer."

"You don't gotta study to do that. Dancin's just somethin' you learn natural. In the bars and shit."

"I mean formal dance."

"What's that?"

"You know . . . jazz, ballet."

He didn't know, and she tried to explain.

"Why you wanna do that?" he asked. "What's the point?"

"To make something beautiful."

For no reason he could figure, he laughed.

Irritated, she said, "I don't suppose you'd understand, but . . ."

"I understand all right!" he snapped, and let his gaze range the length of her body. "I understand beauty just fine."

She flushed and lowered her eyes. "So what do *you* wanna be?"

He had an answer, but the truth of it was all tangled up in words, hidden in snarls of black thready sentences that he would never get to come out straight. The answer wasn't a thing or a job or anything like

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that, but a way to be. He was angry at being unable to express himself, and out of anger, he said, "I ain't rich like you, I ain't got no choice."

"Of course you do," she said.

"Don't gimme that shit! What you know 'bout it?"

"I know you don't have to stay in the Crust. I know if you left, you might find you had other options."

He was about to snap at her again, but a thin droning sound caught his attention. He scanned the horizon.

"What is it?" she asked, alarmed

"Airplane comin' low. Smugglers, maybe."

He spotted it, then. Silver speck glinting to the south, resolving into a twin-engine job. No more than a couple of hundred feet high. The rear door was open, showing blackly against the silver finish, and as the plane drew near, something fell from the door. Something with arms and legs that pinwheeled crazily down to land spreadeagled on the hardpan about fifty yards away, looking like an X marking buried treasure.

"Oh, Jesus!" the gringa said. "It was a man, wasn't it?"

"Could be a woman."

The plane banked toward the east and soon was lost to sight.

"Maybe he's still alive," she said. "Maybe we should go look."

"You go," he said. "You wanna see blood and bone, you go look."

She peered at the unmoving figure, her face grim, registering shock. "He *might* be alive."

"What if he is?" Chapo said. "You wanna pick him up, take him to the hospital? Nearest one's back in the Crust."

The figure seemed to be blackening and dissolving in the heat haze. The gringa continued to peer a few moments longer, then settled back into the shade, her lips thinned.

They didn't talk much after that.

The last of sunset left a red seam of fire along the western horizon, as if north had become west, and the Crust was now ahead of them. The second night was like the first, except the moon was brighter and the gringa didn't bother to smile. She rode with her head down, picking at frays in her jeans, and Chapo knew she was thinking about the dead man. He thought she might start a conversation about him, and he was glad when she kept quiet. What was there to say? That they should have checked him out? Shit! She should thank her stars it hadn't been her. The man's death had given Chapo a lucky feeling. Two nights without being spotted, and the desert had taken someone else instead of them. The signs were favorable. He realized he hadn't been concerned thus far with whether or not they would reach Huayacuatia. The concept of survival had not been part of his plan; he had simply been acting upon some

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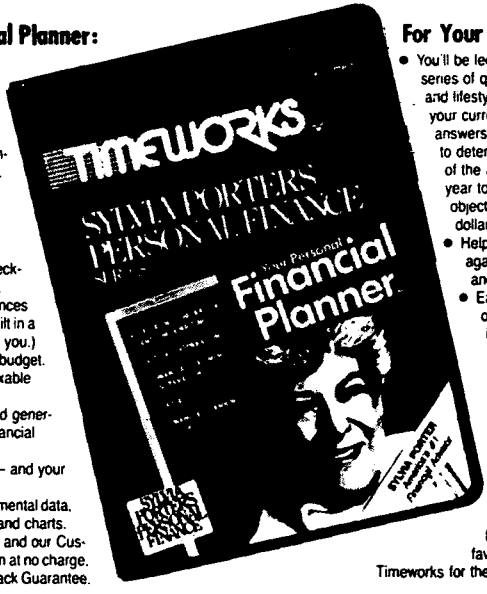

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mysterious inner directive. But now he wanted to make it. Now he had hope.

They didn't arrive at the second hiding place until dawn: another rock, an immense red mushroom cap a hundred feet high. The hardpan had been eroded under its eastern edge, leaving a deep overhang. Chapo drove the jeep beneath the overhang, and worked feverishly at camouflage, finishing just as the fireball cleared the horizon. He poked around in the flaky detritus and stirred up a scorpion. Crushed it with his heel. They made a meal of beans and tortillas behind the jeep, and washed the food down with canteen water. The gringa dabbed water onto her face. In the pink glow she looked tired but more beautiful than she had the previous day, her features finer, as if a layer of drab insulation had been worn away. She pulled the blanket over her shoulders and sat looking out into the new morning.

Chapo couldn't decide whether to sleep or do an upper. He was tired, but if he waited until afternoon to sleep, he'd be fresh for the night drive. He took a pill from his shirt pocket, rolled it back and forth between his thumb and forefinger.

"Hello!" somebody shouted.

Chapo jumped up, knocking his head on the overhang with such force that he went back down to one knee. He grabbed his automatic and peeked from behind the jeep. Standing about thirty feet away was a wrinkled old Indian man wearing a straw hat and a grimy shirt and trousers of white cotton. When he spotted Chapo, he spread his arms and called out, "Welcome to my house!"

"Who is it?" the gringa asked, leaning over Chapo's shoulder.

"Stay back!" He pushed her to the side and moved out into the sun.

"Welcome!" the old man repeated. "My name is Don Augustin. And you?"

"Chapo."

"And the gringa . . . How is she called?"

"Anise," answered the gringa from Chapo's rear.

He spun around. "I told you to stay back!"

"Don't be afraid," said Don Augustin with a chuckle. "I won't hurt you."

He was standing slightly forward and dead-center of a pair of large branching cacti; they looked like two weird, pale green soldiers flanking him. Beyond him, emptiness spread to the horizon. Chapo thought again about brujos.

"Won't you come into my house?" Don Augustin asked. "It's been years since I've had visitors."

"Where is it?" asked the gringa.

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"My house? Behind you." Don Augustin gestured at the rock. "It's cool inside, and there's water. You can wash and rest for your journey."

Chapo leveled the gun at him. "How you know we're on a journey?"

"Oh!" Don Augustin arched an eyebrow, and his wrinkles shifted into lines of good humor. "You've come to see me, then? I'm honored."

"We'll stay here," said Chapo.

"I want to wash," said the gringa defiantly. Before Chapo could stop her, she went a few steps toward the old man. "I don't understand about your house."

"The rock's hollow," said Don Augustin. "Oh, you'll like it, Sēnorita Anise. It's beautiful . . . Not so beautiful as you, of course." He delivered a gallant bow and gestured toward the far side of the rock. "If you will follow me . . ."

"No," said Chapo.

Don Augustin came a couple of paces closer. "If I wanted to harm you would I have made so open an approach? No, I would have waited until you were asleep and"—he made a series of wild hacking motions—"chopped you into bits. I am a man of peace, Sēnor. When you enter my house, you also enter my place of worship, and I permit no violence there. And if it is magic you fear, the only magic here is the magic of this rock."

"Are you a brujo?" Chapo asked.

"That's not an easy question to answer." Don Augustin tipped back his hat and scratched his head; despite his apparent age, his hair was jet black. "Perhaps I am, and pehaps I'm not. But if I am, I have never sought the wisdom—it has simply been visited upon me, and I have no real use for it."

Chapo was inclined to believe him, but he distrusted this inclination and gave no reply.

"Please, Chapo." The gringa put her hand on his arm. "He's not going to hurt us."

"Listen to her, Chapo," said Don Augustin. "She has the wisdom of innocence, and because this place is innocent, here she must be your guide."

From these words Chapo had the idea that the old man knew everything about them, and if that were the case, if he had that much power, there was no point in being cautious. "All right," he said. "But careful, man. No tricks."

"Don't worry," said Don Augustin, and grinned. "Such a big gun! I'd never risk myself against it." And beckoning them to follow, he hustled off around the rock.

Sheltered beneath an overhang on the western side of the rock was a narrow entrance that led downward into blackness. Chapo held the gun

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on Don Augustin and let the gringa explore the opening. After a second she called back, "Come on! It *is* beautiful!"

"I told you," said Don Augustin with a wink.

Chapo forced him to take the lead, keeping a tight grasp on his shirt, and they entered together. Cool air washed over him, and in the moment before his eyes adjusted to the dimness he was overcome with fear; he had a sense of having intruded upon some inhuman presence, and he flung his arm around Don Augustin's neck in a chokehold. But an instant later, though that sense of alienness did not diminish, he felt secure and at peace. Gradually the interior of the rock melted up from the dark. Four kerosene lanterns were set high on the walls at what Chapo took to be the cardinal points, and in their glow he saw that the center of the hollow—which was quite large, maybe seventy across and forty feet high—was occupied by a sunken pool. The water captured a sheen of the lantern light and seemed to be radiating a golden energy. Kneeling beside it, her head turned toward them, the gringa resembled a magical creature surprised in the act of drinking.

"Isn't it wonderful?" she said, and Chapo could only nod.

Ranged along the walls were stacks of books, bulging grain sacks, bundles of kindling, a pallet, and what appeared to be an altar on which rested a glowing cube. Chapo crossed the hollow to the altar and saw that the cube contained a silver rose. From moment to moment, the rose would become opaque and then solidify; it floated in brilliant eddies of its own light and was revolving slowly.

"A hologram," said the gringa, coming up beside Chapo.

"Ah," said Don Augustin. "So that's what it was."

"Was?" said the gringa.

"Everything changes into its ideal here," replied Don Augustin. "That's why I stay." He laughed. "You should have seen me before I came. I was a truly despicable sort."

The gringa pointed at the rose. "And what is it becoming?"

Don Augustin shook his head. "Who can say? I will watch and learn. But it is already a very important something." He took the gringa by the shoulders and guided her a few steps toward the pool. "You must wash, Sēnorita Anise."

"But . . ." The gringa seemed flustered.

"You are concerned by lack of privacy?"

"I . . . yes . . ."

"We will marvel at your beauty . . . nothing more." Don Augustin gave her a gentle push forward, then took Chapo by the arm, led him to a pair of wicker chairs set at one end of the pallet, and urged him to sit. "Would you like some whiskey?" he asked. From behind his chair he withdrew a dusty bottle and two glasses, and poured them each half full.

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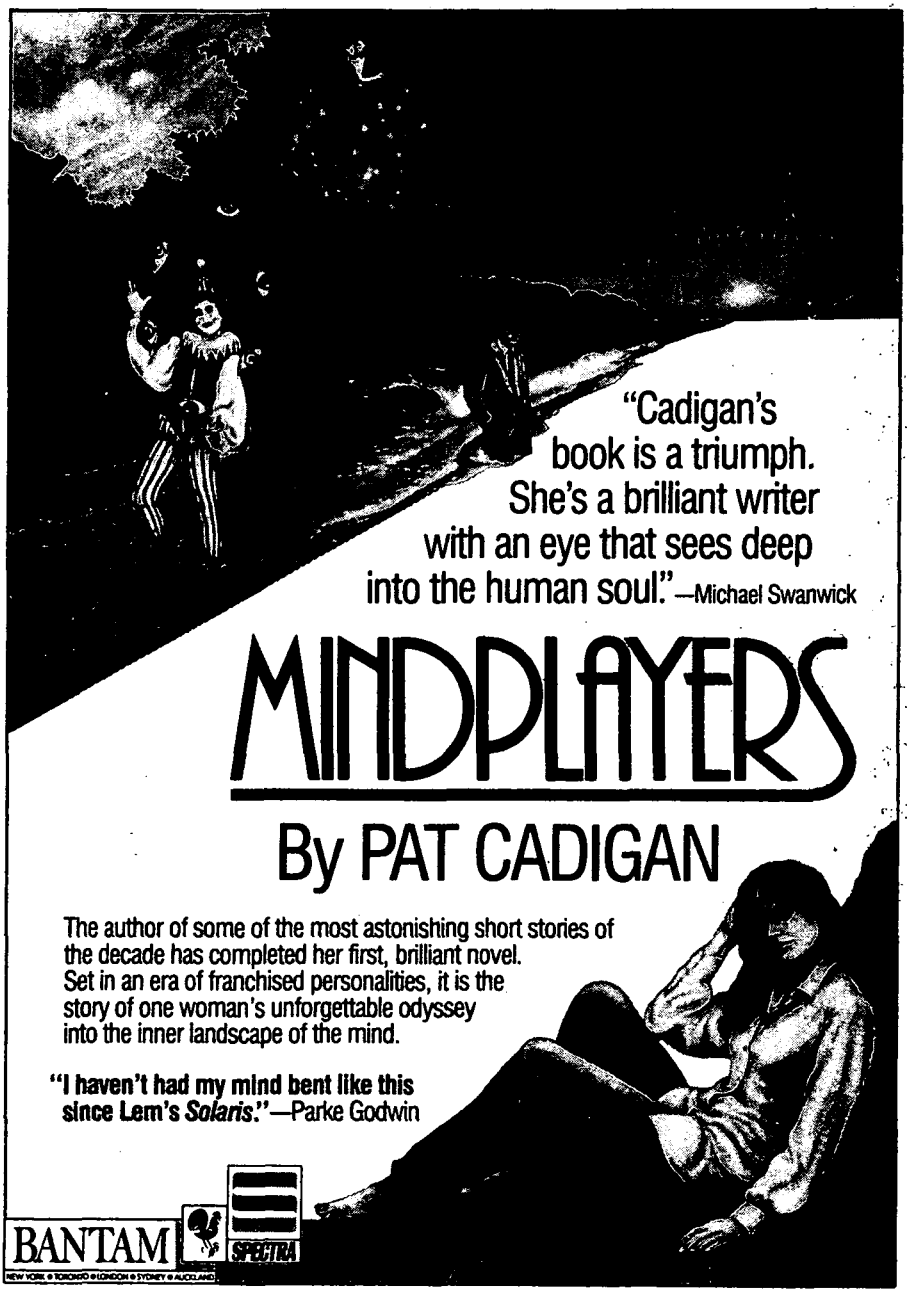
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Chapo could not keep his eyes from straying to the gringa. Poised on the brink of the pool, naked to the waist, her nipples showing lavender against the milky skin of her breasts.

"The feminine form," said Don Augustin, raising his glass. "Even in its most unlovely incarnation, a miracle to behold."

Chapo drank, shut his eyes against the fire burning his throat, and heard a splash. He was disappointed not to have seen the rest of the gringa.

Don Augustin smiled. "Why don't you call her by name?"

Certain now that he was in the company of a brujo, Chapo didn't bother to ask how the old man had known this. "I don't like it."

"It strikes you as artificial?"

"Yeah, I guess."

"And yet it suits her, does it not? Contemplate the meaning of the word, Chapo. A clear intoxicating liquid with a complex and tart flavor. You really should use her name. I have faith you soon will."

Before Chapo could speak, the old man produced a vial from his pocket and held it up to catch the light. Within was a quantity of brown powder. "Perhaps you'd care to try some?" Don Augustin asked.

Chapo grew suspicious. "I ain't takin' your drugs, man. You think I'm stupid?"

"Try it, Chapo, and you will receive strengthening insights." Don Augustin opened the vial and spilled a little into Chapo's glass. "Once this was a powerful drug that wrenched the soul and left the body aching for days on end. But here it has become perfected, and before Anise returns, you will also have returned. And you will understand much that now you do not . . . though you may not realize it."

Chapo felt no compulsion to drink, and yet he did: what the old man had said seemed not coercive but reasonable. He experienced a brief anxiety and a sensation of vertigo. Then he was back to normal. Standing on the verge of an underground lake in a vast cavern, its ceiling thronged with stars. Awaiting the arrival of a golden boat that would bear him to the other side. The boat drew up to shore, rowed by men with muscular torsos and the heads of eagles. Chapo boarded and sat among them as they propelled him along in long gliding strokes. Their speech was like music, and though he didn't recognize the separate words, he understood their meaning. They were counseling him to steadfastness, to resist wrong turnings, to moral wisdom. At last the boat reached the far side, and Chapo walked out into a world of such brilliance that every shape appeared to be shifting, alternately becoming larger and smaller. It was as if he were walking through a forest of living crystals that grew and changed in a rain of light. It was so bright that he could not see the

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companion who had met him at the landing, nor the king whose judgment he must endure.

"That wasn't so bad, was it?" said Don Augustin.

Chapo blinked to see the rough rock walls, the wicker chairs, the dimly lit pool beside which Anise was standing, doing the buttons of her blouse. "What was that place, man?" he asked.

"Making decisions is difficult even for the informed." Don Augustin removed his straw hat and ran a hand through his young man's hair. "And of course you won't think of this during the crucial moment. Just remember, Chapo. There's no such thing as happiness. Only fools like the Americans pursue it. To use strength wisely—that's the only happiness you can know."

Anise came walking up. She inclined her head and squeezed a few last drops of water from a cable of her long blond hair. Her skin shone. She looked brand new. "I had the oddest dream just now," she said. "I mean I was awake, but I could have sworn it was a dream."

The three of them sat beneath the altar of the silver rose and ate a meal of stew and tortillas that Don Augustin had prepared over a small fire; the smoke from the fire was drawn toward the roof of the cave as if by a draft, but Chapo could see no smokehole. Don Augustin told them stories of his days selling blankets at a roadside stall north of Oaxaca. How he had cheated the gringos. How he had met a magician who had been transformed into a donkey. How once he had become so drunk on pulque that he had crossed over into the world of drunkards, where sidewalks sometimes ran along the sides of walls and the metal of lampposts was often pliant, where reflections were doubled and shadows were prone to turn into an inky liquid and drain off downhill. Finally he made them a bed of empty grain sacks and advised them to rest. They lay close together, almost touching, gazing up at the hypnotic revolutions of the silver rose, bathed in its eerie light, and soon were fast asleep.

The glow of sunset was shining through the cave mouth when they waked. Don Augustin was nowhere to be seen, but as they headed outside they discovered two objects lying just inside the entrance and knew without having to be told that these were his gifts. For Chapo there was a knife with a blood-red handle, and for Anise there was a blouse embroidered with a silver rose. Without the least sign of self-consciousness, she shrugged out of the one Chapo had bought and put the new one on. Only after she had done buttoning it did she display embarrassment. To make her feel at ease, Chapo pretended not to have noticed. They walked around to the white jeep, climbed in and drove west toward a horizon brushed with streaks of slate and mauve, where the evening star was now ascending.

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They reached the final hiding place several hours before dawn. It was the largest of the three rocks, resembling a miniature mountain chain with separate peaks and slopes, and it faced onto the first of a range of brown hills dotted with organpipe cactus. Centuries of wind had carved a deep bay into the rock, and they drove the jeep all the way in and covered it with mesquite. Then they climbed to the top of the lowest peak and lay down in a shallow depression from which they could see for miles in every direction. To the east, south, and north all was still. Under the full moon, the desert was a milky white plain flecked by a thousand shadows. But to the west among the hills there showed an intermittent green glow. Watching it flicker and vanish made the back of Chapo's neck prickle.

Anise edged closer to him. "What could it be?"

"That's where we gonna get gas."

"The village?" She looked horrified.

"San Juan de la Fiebra. They a buncha crazy fuckers. Some gringo come a few years back and give 'em Stateside drugs. All kinda extreme shit. And he preached this weird religion . . . like it's got Jesus, but other gods, too. You gotta watch your behavior 'round there."

She stared out at the hills, her eyes narrowing as if focusing in on something he couldn't see. "We'll be all right," she said flatly. "Ever since we met Don Augustin, I've known that."

Chapo grunted. "You can't trust how brujos make you feel."

"It's hard to believe that's what he was."

"What else?"

She thought about it. "I don't know."

Pale clouds were drifting across the stars in the west, and Chapo wondered if the clouds were above the sea. He lay flat on his stomach, watching them cruise.

"What are you gonna do after we get to Huayacuatia, Chapo."

"Head on back, probably."

She didn't say anything, but after a couple of seconds she ran her hand along the back of his neck. The touch made him shiver. He didn't look up.

"Chapo?" She whispered it, her voice burred.

He had to look at her, then. She was smiling just enough to show a sliver of teeth as white as the desert, and the centers of her all-colored eyes were pricked with moonlight, and her golden hair was outlined in stars. He felt he was falling up toward her.

"Yeah, I . . ."

"I want you," she said.

Nobody had ever said it that way to him. Let's fuck, maybe. Let's go

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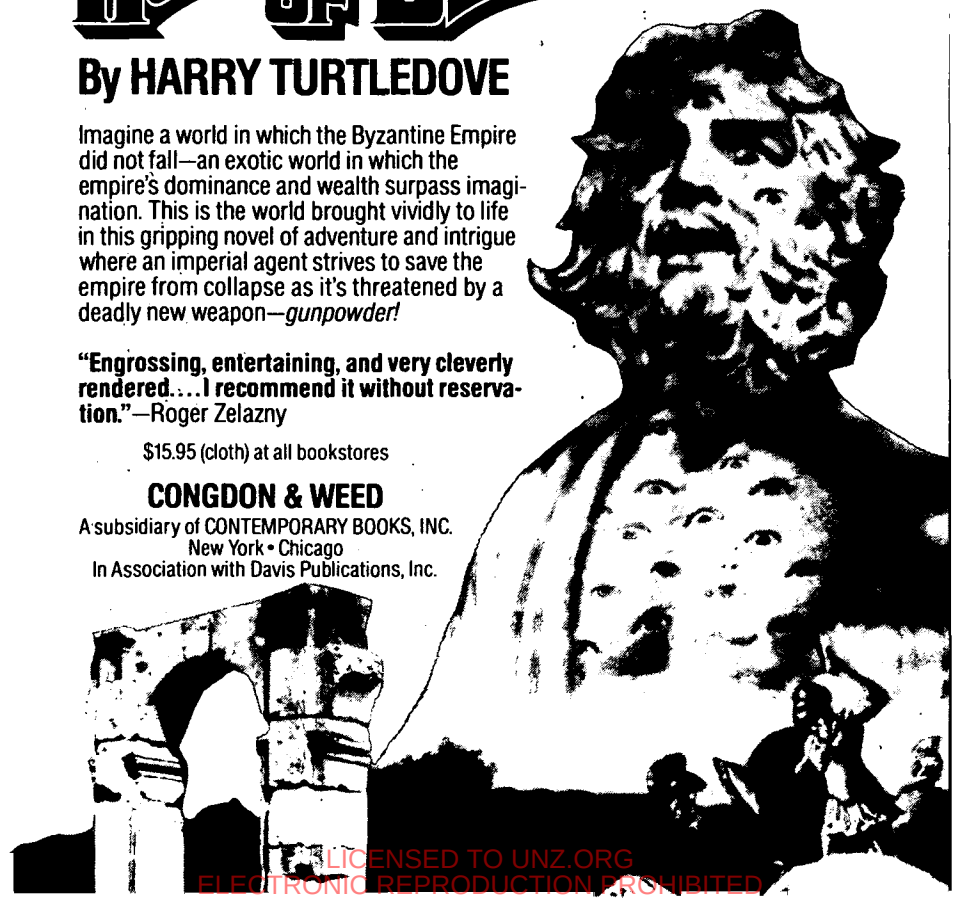

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upstairs, or Let's see what you got, Chapo. Never "I want you." He almost didn't know what it meant, and maybe it didn't mean what he thought. He wasn't sure how to answer. "Why?" he said, and felt foolish. Acting like it was his first time. But he *couldn't* understand why. Just because he'd been helping her? That was a good reason, he guessed. But he hadn't thought it would be her reason.

She took his hand and laid it on the silver rose, on the soft weights beneath. The nipple hardened against his palm. He closed his fingers around her breast, squeezing it, and she arched her back, pressing against his hand. She let out a hissing breath. He moved his other hand beneath the blouse, then moved both hands over her breasts, cupping them, rubbing the aureoles with the balls of his thumbs, knowing their shapes. She unbuttoned the blouse, tossed it aside. It floated away like a silver wing. Veiled in her hair, he kissed the milky flesh. So much warmth, so much sweetness. He lost track of where his hands were, what his lips were doing. It was all warmth, all sweetness, and she was whispering his name, saying she wanted him, wanted him now.

Going into her was like falling into a good dream, and it *was* different with her . . . So different he couldn't say exactly how. He worried about her back on the stone, about hurting her. But soon he stopped worrying, and what he felt at the end was maybe a little stronger, a little more heat, but really was pretty much like all the other times, except for how happy he was at what *she* felt, at the way her body stiffened, her nails pricking him deep, holding him tight and still, as if were he to move, she'd break into pieces.

Afterward, becoming aware again of the cold desert wind, they got under the blanket, and Anise began talking excitedly, saying she loved him, saying he couldn't go back to the Crust, he should return to LA with her and go to school, and she loved him, and her father would help them get started, and Oh, Chapo, how much I love you, and he didn't know what to say. He had thought he'd known her before they made love, but though now he felt intimate with her, she also seemed a stranger, someone new. He realized he hadn't known her, that she had been in his eyes an emblem of foreign territory, of wealth and mysterious cities, a border he had finally crossed. Now she was no longer an emblem but real, and he was confused. Who was she? He turned on his side, pushed her gently onto her back and looked down at her, trying to find her inside her eyes, trying to understand what he felt.

"Chapo," she said, reaching up to him.

He laid a finger to her lips and studied her face.

"What are you doing?" she asked.

"Shh!"

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"I know," she said after a while, "I know there's things you want to tell me, but you can't find the words."

He nodded.

"You'll find them," she said. "You will! But you have to come back with me . . . to LA."

She started talking again, but slower, her words as gentle as an easy rain, and everything she said clarified something behind her eyes, something he felt. He could see her strength, her goodness, and his recognition of those qualities seemed to make what he felt equally good and strong . . . though he couldn't put a name to his feelings. She told him about her city, the towers, the displays of light in the sky, the exotic pleasures and the roar of fifteen million souls. What she said began to make sense. He would go to LA, he would understand everything. And in that country of light, wealth would be a power, a power he could use in ways that the wealthy Americans had forgotten. He saw this was to be his destiny.

The sky paled to lavender, the stars thinned and shone gold, and they made love once again. They made love into the morning, into the blazing heat, and though he was bone-weary, Chapo could not stop making love to her. It was too beautiful to stop, too important a connection to break. And when at last they did fall asleep, they were still joined, still tangled like a knot of brown and white thread. In Chapo's dream he thought they were melting, becoming stone, and in the days to come they would be mistaken by other lovers who had climbed this high for a vaguely human shape produced from the rock by a miracle of wind and weather.

At dusk they drove into the hills and stopped on a rise above the village of San Juan de la Fiebra. At that distance it looked to be a peaceful place of white houses with red tile roofs and lights dancing in the windows. Chapo gave his pistol to Anise and told her to hide among the cactus until he returned. She begged him to take care, kissing him with such passion that when he drove away, he felt he was off on a noble mission and not simply going to find gas.

Though the rise was only a few hundred feet above San Juan de la Fiebra, the road wound through the hills, and it took Chapo half an hour to reach the village. Entering it, he passed the remains of an enormous bonfire, itself the size of a small hill, from which projected weird charred shapes that reminded him of giant insect legs, and he assumed this had been the source of the green glow. On the walls of the houses were painted horned goats and bearded corpses and creatures half fly and half man, all done in drips and spatters of red paint, making it seem they'd been rendered in a murder victim's blood. People dressed like campesinos in white cotton and straw hats came into the streets on hearing his engine.

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They stood in the street ahead of him, and he was forced to weave in and out among them, obscuring them in the wake of his dust. They were mostly wiry people of Indian stock, but he spotted a few with dark skin and blue eyes and a gringo cast to their features; they said nothing, only tracked him with their stares. A cold patch formed between his shoulderblades, and he had trouble swallowing.

At the far end of the village stood a Mexalina station, also adorned with grisly murals, its green pumps decorated like evil Christmas trees with garlands of cactus buds and wreaths of whitish leaves. As he approached, an amplified voice began speaking from somewhere. "GUARDIANS, AWAKE! FOR IN THE TIME OF THE FURY, THOU MUST BE EVER VIGILANT. BEWARE THE STRANGER WHO BEARS THE SEEDS OF JOY IN HIS HEART, FOR FROM HIS JOY MAY SPROUT THE FRUITS OF CORRUPTION."

Chapo pulled up to the pumps and cut the engine. A gaunt man wearing a grease-stained coverall, with coppery skin and gray streaks in his hair, ambled toward him from the door. Chapo ordered ten gallons, having to shout to make himself heard over the voice, which continued its Biblical admonitions; it was so loud, he could scarcely think. Pretending to be at ease, unconcerned, he got out of the jeep and went over to the Coke machine. Fed in coins. He uncapped the frosty bottle and took a deep drink. Looked back along the street. None of the people had moved. They were all gazing toward the station. The lights from the windows were unbelievably bright, spraying golden rays into the streets, as if each house contained a sun, and above the crown of the hill where Anise was hiding, the stars were showing this same golden color against the black sky.

". . . SHOW HIM THE MERCY OF MAD JESUS GONE SCREAMING FROM THE TOMB, HIS NAILS TIPPED WITH BLOOD, HIS THOUGHTS LIKE KNIVES . . ."

Chapo glanced into the window of the station. And froze. Sitting on the counter beside the cash register was a hologram identical to the one belonging to Don Augustin: a silver rose revolving in its own glow. He didn't know what to make of it, whether it was a bad sign or good.

". . . HARROW HIM, TEST HIM, FOR ONLY THUS WILL YOU KNOW HIM . . ."

The voice was switched off. Turning, Chapo saw that six men on motorcyles were ranged along the street facing the station. Their rides were sleek and finished in black enamel that gleamed like chitin; they wore red helmets, and their headlights were green and faceted like insect eyes. Pistols at their sides. The attendant holstered the pump in its socket and came over. Chapo fumbled for his wallet. But the attendant held up his hand to ward off payment. "No charge, Sēnor," he said, and smiled. His

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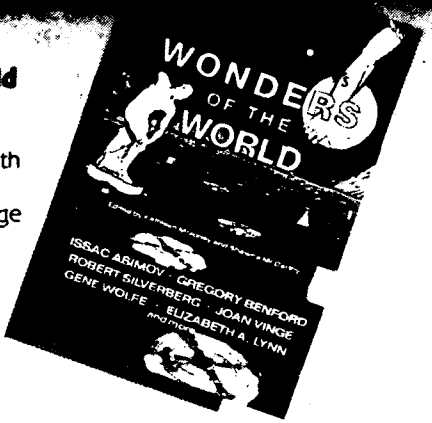

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incisors were rimmed with gold, and a red stone like a drop of blood was set into one of the front teeth.

"It's all right," said Chapo. "I want to pay."

The attendant just kept smiling.

One of the motorcyclists revved his engine and glided to within a few feet of Chapo. "Where are you going?" he asked.

Chapo couldn't see his face behind the black plastic of the helmet. "To Huayacuatia," he said.

"And from where do you come?"

"The Crust."

The man shouted this information to the other motorcyclists, and they absorbed it without reaction. He turned back to Chapo. Lifted his visor and peered at Chapo. His face was bronzed and hawkish, and his eyes were balled and white like a statue's eyes, with no irises or pupils. Beneath his left ear, tracing the jawline, was a thin scar. Chapo's legs felt weak and boneless, and gooseflesh fanned across his shoulders.

"Are you a true believer?" the man asked.

Despite those eyes, Chapo knew the man could somehow perceive him, and he did not think he could successfully lie. "In what should I believe?"

"In the mysteries and the drugs." The man held up a vial of brown powder that dangled from a chain around his neck, and Chapo recognized it to be the drug he'd taken in the cave. "In the power of uncreated things, in the light bred from the final darkness."

"I know the drug," said Chapo. "But I don't understand these other things."

The man leaned toward him over his handlebars. "You are no seeker," he said, making it sound lik an accusation.

Chapo shrugged. "I gotta be goin', man."

The man settled back on his seat. "Go, then."

As he walked back to the jeep, Chapo could sense the man's white eyes driving nails into his back. He climbed in, switched on the ignition. The needle on the gas gauge stabilized at almost three-quarters full. At least that much was all right. He gunned the engine. Then he pulled away from the pumps, swung the jeep into a U-turn and passed behind the five motorcyclists. They didn't bother to turn and watch him.

Once again he had to weave in and out among the bystanders. But this time they paid him no mind. They gazed intently toward the station as if awaiting instructions. At the site of the bonfire, people were piling cactus limbs onto the charred heap, and Chapo wondered if that was how they got it to burn a funny color, if the cactus limbs yielded a green essence. He listened for the sound of motorcycle engines as he drove into the hills, and heard nothing. Yet he didn't feel right. How could you feel right in a place where blind men could see?

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He stopped on the crest of the rise, and Anise came scrambling up from a gulley. "Did you get it?" she asked breathlessly, climbing in.

"Yeah," he said, and was about to add that there might be trouble, when a shot rang out. Pinged off the hood. More shots. He pushed Anise out of the jeep and hauled her back down into the gulley, behind a boulder. Grabbed the pistol from her and trained it on the slopes. The moon was just up, and in its light the ranks of cacti looked unreal: an alien army with shadowy upraised arms. Then he heard the motorcycles. They were buzzing, swarming nearby. He glanced right. Left. That way the gulley gave out into a pitch of huge boulders. Gray shapes. Like frozen waves, melted statues. Motorcycles would never be able to penetrate them, at least not with any speed. Taking Anise's hand, he moved in a crouch along the gulley.

Raspy whine of an engine winding out, and one of the motorcycles jumped the gulley. Fire lanced down from a shadow hand, and Chapo returned the fire. Knew he'd missed.

"Who are they?" Anise clutched at his arm.

"I don't know."

He could still hear the engines buzzing as they entered the field of broken boulders, but he couldn't see any of them. Like spirits, invisible when you turned your eye on them, reappearing when you looked away. He crawled through the boulders until he found one with a cleft that offered a clear field of fire up and down slope. He drew a deep breath. Fear was stamped on Anise's face, and he couldn't think of anything to ease her. The silver rose on her chest heaved.

Fuckin' brujo!

Chapo checked his clip. Seven left. Seven bullets for six riders. He dug the red knife from his pocket, handed it to Anise. For a split-second, he thought she was going to fling it down. But then she flicked open the blade and set herself. Ready to fight. Chapo felt proud of her.

"Listen!" she said.

The engines had stopped.

He peeked out over the boulder. Spotted a couple of shadows edging toward them downslope. Maybe this wasn't such a great place to make a stand. He looked behind them. Adrenaline was pumping his heart, and his eyes were strained so wide, it seemed he could see every weed and pebble. The boulder field declined into the deep shadow of the next hill. Darkness like black gas. What the hell! There might be a cave. A trail. Something. He led the way through the rocks, keeping in a crouch. The amplified voice began to echo up from the village, the words unintelligible, booming out its nonsense. Loud enough that he couldn't hear the scrape of a boot, the rattle of a kicked pebble. The bastards might have planned it!

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Halfway across the field, he began to feel a presence nearby. It was a trustworthy feeling, a Crust feeling. Tuning his senses higher.

But it didn't help.

As they passed between two of the larger boulders, a rider jumped him. Knocked him flat. Chapo lost his grip on the automatic. The rider pinned him with his knees, smashed a gloved fist into his chin, dazing him. Chapo could see his vague reflection in the visor above him. Then the rider leaped up, a red knife sprouting from his shoulder, and backhanded Anise to the ground. Chapo scrabbled for the automatic, found it. Squeezed off a round just as the rider dived at him. The bullet twisted the rider in mid-air, and he landed face down beside Chapo. Muffled wet sounds came from inside the helmet.

Chapo came to his knees. A serpent of blood trickled from the corner of Anise's mouth, black-looking. He started to stand, but something cold touched the back of his head, and a hollow voice told him to put down the gun. Three more riders stepped from behind stones and stood over Anise. Chapo dropped his eyes. Studied the weeds springing up by his knees, the pattern of pebbles. He had been waiting for this moment all his life, and now it was here, he almost welcomed it.

Anise was speaking, but Chapo was too gone into his preparation for death to hear the words. He tried to think about something good. That's what Moro had told him before they had crossed to Stateside. "If you feel it comin', man," Moro had said, "think 'bout somethin' good. 'Cause then if you live forever, maybe you go with that good thing. And if you don't"—Moro had grinned—"what the fuck's the difference?" Chapo called up memories of the red glow, the border. Wild nights. None of it seemed good. His only good thing was that one time with Anise, and that was too much the reason for his dying to give him the peace he needed.

The last rider emerged from behind a boulder and looked down at Chapo. No way to tell because they were all dressed alike, all hidden behind their visors, but Chapo figured him for the one he'd talked to back at the Mexalina station. The rider nodded, as if seeing exactly what he'd expected. He turned and went a step toward Anise. Two of the men had hauled her to her feet and were gripping her arms. Their leader stopped dead and flipped up his visor. Lifted his chained vial, tapped a little powder onto his tongue. Gazed at her chest. From where Chapo was kneeling, he could see the rider's warrior profile. One white eye bright as new marble, set in a stern bronze mask. The rider removed his helmet. His black hair feathered in the breeze. He laid his hand flat against the silver rose on Anise's breast. She squirmed, and the two men holding her applied pressure, making her cry out. The rider tipped his head to the sky and stood absolutely still. After a second, his hand began to

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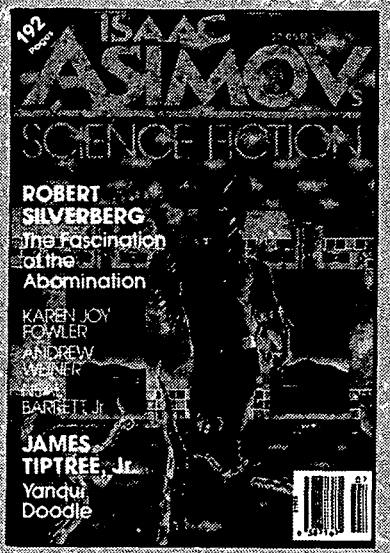

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tremble. He jerked it away, said something in Indian to the two men. They let go of Anise.

She hesitated a moment. Then she scuttled to Chapo's side and kneeled beside him, throwing an arm around his shoulder. The cold thing at the back of Chapo's head went away. Blond hair curtained his eyes, and he brushed it aside. The rider walked over, holding his helmet under his arm like a knight after a tournament; the rest gathered behind him. He gestured to the body, and two of the others picked the dead man up, propping him erect between them. His knees were buckled, his chest a mire of blood and charred fabric. Yet Chapo had a funny notion that he wasn't dead. Not dead forever, anyhow. If blind men could see in San Juan de la Fiebra, maybe the dead could be reclaimed. The careful way they were treating the body supported that notion.

"Who are you?" asked the rider.

Chapo was still halfway to death. He didn't have an answer.

"I'm an American," said Anise tremulously, as if citizenship were at the core of her being.

One of the men laughed. "They don't know who they are."

"Who are you?" the rider repeated.

Chapo got slowly to his feet, feeling drained. He looked into the rider's white eyes. Depthless glowing surfaces like the desert. "Tell me why it's important," he said.

"It's not important," said the rider. "I merely wish to know."

"I'm Chapo, and she's Anise."

Once again there was laughter, and the rider said, "These are only your names. Perhaps you *don't* know who you are."

"Well, who are you?" Anise shrilled. "Just who the hell do you think you are to go . . ." She broke off, cowed by the rider's stare.

"I am a Guardian of San Juan de la Fiebra," he said. "I am the madness of Christ, and the innocence of Moloch. I follow the northern teachings, and I have borne witness to the man in the desert . . . as have you, apparently." He indicated Anise's blouse.

"Don Augustin?" Anise looked at Chapo, then back at the rider. "Is that who you mean?"

"By his sign you may pass," said the rider. "But be warned. Do not return to San Juan de la Fiebra until you have learned who you are."

He signaled the others, and carrying their dead companion, they headed up the slope, becoming lost among the shadows of the boulder field.

Anise slumped down, leaning against Chapo. "You see?" she said. "He did help us. I *knew* he did."

Chapo watched the slope, wanting to make sure the riders had gone. "The brujo?"

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"Uh-huh."

"Maybe, maybe not."

The brujo's red knife lay on the ground. Chapo wiped the blade clean on his trousers, folded it and slipped it into his pocket.

"How can you say that?" asked Anise.

"I told you . . . you can't trust brujos. The drug he gave me, the dream you had. All this might still be part of that. Could be none of it happened, or just a little of it happened, and this"—he tapped his forehead—"this did the rest."

"Why would you think that?" She stroked his hair, concern on her face.

"You believe a blind man can see? Shit! That coulda been what'cha call a hallucination."

"No it wasn't!"

"You believe in magic?"

"I don't know if I do or not. But that wasn't magic."

"What was it, then?"

"Little cameras in his eyes, wired to the optic nerves. Didn't you see his scar?" She touched Chapo's cheek beneath his left ear. "That's where they put the power source. I've seen the same thing a hundred times."

"You sure?"

"Of course." She took him by the shoulders. "Don't you start thinking none of this is real, Chapo." She kissed him, and like a slow magic, the kiss gradually brought him all the way back to life. Gold flecks seemed to have surfaced in her eyes, and everything about her seemed to have been refined. "There," she said, smiling. "Is that what you call a hallucination?"

"No," said Chapo, dazzled.

"It's all been real," she said. "That's how I know we're supposed to be together . . . because it's been so strong."

Chapo went along with her, but in his heart he wasn't so sure. Blind men with cameras in their eyes . . . That didn't sound real to him.

From a hilltop above the Pacific, Huayacuatia looked like Paradise. White sand fringed by a tame jungle of orchids and sapodilla, auguacaste and sabal palms. The trunks of the palms were bowed toward the sea, and a westerly breeze blew their fronds back from it. Half-hidden among the vegetation were villas and hotels of all colors. Pastel blues and yellows and pinks. Late afternoon sun kindled diamond fires out on the sea. As they drove into the town, music came to their ears. Soft, sweet music that seemed to be part of the wind and not issuing from a mechanical source. Laughter came from behind the high walls of the hotels, and even the policemen smiled.

They drove onto the grounds of the biggest hotel beneath a blue stucco

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arch with ironwork letters that spelled CASA DE MIRAGLOS. The young man who parked their jeep wore a white jacket and creased blue trousers and shiny shoes, and looked a lot like Chapo. He gave Chapo a suspicious glance, smiled at Anise, and told them they could find the manager's office beyond the swimming pool. They walked leisurely along a flagstone path past bungalows with macaws tethered to perches beside the door. Bright things darted high in the branches of fig and mango trees. Chapo thought they were birds, but then one swooped close, circling him, and he saw it was a bright blue ball with stylized yellow wings and no head. Alarmed, he swatted at it. The thing let out a warbling squeal and broke into dozens of cartoon music notes that played a melody as they faded. Not wanting to appear unsophisticated, Chapo didn't ask what it was. The things kept swooping at him, giving him starts. He smiled and pretended he'd seen them many times before.

The pool was an Olympic-sized emerald lozenge filled with swimmers, and people were sitting beneath striped umbrellas around it. One woman whose face looked about sixty years old had the body of a teenager; her hair changed color as she talked, shifting from vivid green to crimson to a striped design of black and yellow. Something silver and saucer-shaped sailed through the air and landed at Chapo's feet; tiny silver animals swarmed off it, leaped into the pool and vanished. Two kids ran over. One snatched the saucer up and sailed it across the pool toward another kid. A withered white-haired man was talking rapidly to three women, his words materializing in pale smoke above his head; when he stopped for breath, the smoke strung out into little dots, giving visible expression to his pause. Chapo felt lost. There were a hundred things going on that he didn't understand. He remembered Don Augustin's world of drunkards, and had the idea that he had stumbled into a sillier version of it.

In the manager's office, Anise placed a call to her father in the States. But he was on the border, and would be out of touch until late that night. No problem, said the manager. He'd arrange a couple of rooms and . . .

"One room will do," said Anise. "And if you could pick up some clean clothes . . . for both of us."

The manager had difficulty repressing a look of disapproval, but said it would be his pleasure.

Two hours later, dressed in fine clothes, they ate dinner in the hotel restaurant: a dimly lit room with heavy silver and candelabras and linen tablecloths. White birds of pure light winged silently above their heads. Music seemed to be everywhere, even in the conversations of the people dining nearby. In the center of the room was a pit from which a sculpture made of fire leaped and crackled, shaping itself into image after image. Jaguar, swan, serpent, and a hundred more. The waiters went about

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their work as silently as the birds of light, depositing new dishes and bottles of wine. Chapo was astounded, delighted. He had never seen such beauty, never tasted such food. Though he had been nervous upon entering the restaurant, he soon felt at home. They drank and laughed, laughed and drank, talking of the things they would do in LA. With their dessert, the waiter brought a note for Anise; it said her father would arrive the next morning.

"You'll like him," she told Chapo. "He's different from these people. Strong like you."

Dizzy with the wine, Chapo believed her. Disbelief was not in him. Through the silver branches of the candelabra, she seemed to sparkle. Even the things she said seemed to leave a sparkle in the air, and he was coming to think that this sparkle was emblematic of the real world.

They finished eating, and as he stood Chapo knocked over a bottle of wine. A rich red stain spread over the tablecloth. Their waiter mopped at the stain, assuring him that it was no trouble, his tone apologetic. But the other diners stared and laughed behind their hands. Chapo was frozen by those stares, feeling as if he had been caught at something.

"Don't pay any attention to them," Anise said, pulling him away.

In the central pit a fiery eagle appeared to be looking straight at Chapo, regarding him with disfavor.

Making love that night was not as good for Chapo as it had been on the desert. The room was so large, so incomprehensible in its luxury. Everything vanished into the walls at the push of a button. Punch room service, and the image of a beautiful woman sprang out of nowhere to take your order. If you touched an ordinary surface, music would play or walls would turn into windows or video screens. And as he made love to Anise, he couldn't escape the feeling that any moment the wrong surface would be touched and the room would fold in upon them and he, too, would vanish or be transformed.

He waked around three o'clock, needing to go to the bathroom. But he couldn't find the button that made the toilet appear. Finally, not wanting to wake Anise and show what an idiot he was, he went out into the hall and urinated in a potted plant. A couple walked past the instant he had done zipping up, and he pretended to be examining the leaves. He returned to the room and lay down beside Anise. She was beautiful in the half-light, with the silken coverlet slipped down to her waist. Her breasts had the same glistening smoothness as the material, and her face had the serenity of a goddess. She would help him, he thought. She would teach him how to move in her brilliant world. But the thought did not comfort him, and he was unable to get back to sleep.

The next morning, waiting for her father, Chapo sat on the edge of a

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chair, his hands clasped in his lap. He sat very still as if posing for a photograph. No thoughts occurred to him. The inside of his head might have been poured full of cement. Anise was busy telephoning friends in the States, and didn't notice his silence.

Suddenly the door burst open, and a lean sun-burned man with blond hair strode in. He didn't seem old enough to be Anise's father, but she ran to him and hugged him, talking a mile a minute. Chapo sat without moving. Anise pulled back from her father, and said, "Daddy, I want you to meet someone."

The man looked at Chapo and smiled thinly. "Oh, yeah." Keeping an arm around Anise, he reached into his jacket pocket and extracted a banded stack of bills. Held them out. "Here y'are, boy. Twenty-five thousand . . . just like advertised." His stare locked onto Chapo's, and in that exchange, in his pose, was a world of information. *This is mine*, said the arm around Anise. *This is yours*, said the hand holding the bills. *And that's all you're getting*, said the stare. Chapo wasn't afraid of him. But he understood something else from the man's attitude. He couldn't have put that sense of ultimate distance and difference into words, and maybe the man couldn't have done so, either. Yet they both were aware of it.

"No, Daddy," said Anise. "That's not how it is. He and I . . ."

Chapo could barely hear her. She was already receding from him, crossing the border into her own land. He got up and walked over to them and took the money. It had a good weight.

"Chapo!" Amazement, shock.

He eased past them into the hall. She cried out again, but then the door slammed shut, shearing off her voice.

The young man who brought the jeep from the parking lot extended his hand for a tip. Chapo cursed him and sped out beneath the blue arch. He sat for a moment beyond the arch, letting the engine idle, letting the warm sun soak into him. He felt empty, but the feeling was clean. A freedom from wanting, from dreams too sweet to digest. He had a final look around at Paradise. It wasn't so goddamn much! It was frail. One lapse in security, and the monkeys would come swinging back to retake the jungle, and the Devil would bask by the emerald pool, his laughter echoing through the ruins. One shot of heavy weather, and you wouldn't be able to tell it from the Crust. That was the Crust's strength: it was already down to the bone. Chapo blew out a long sighing breath, wishing he could get rid of memories as easily as bad air. Then he threw the jeep into gear and headed north along the coast, taking the legal roads home.

Back in the Crust, back in the cellar among the candles and shadows. Chapo hid the money a dozen places, two thousand dollars in each. He held back the last thousand. He'd take it and have himself a night. Spend

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it at La Manzanita. They had the best girls there. Young girls fresh from in the villages, still full of life, still believing the Crust was everything you could hope for. Maybe he'd have twenty-five such nights. What else could he do with the money? A bar, a business? He couldn't picture himself growing old and fat behind a counter. No, he'd have twenty-five nights to remind him of Anise. To light a thought like a blond candle, set it burning in the blackness of his skull. He wondered what had been between them. Love? Yeah, a little. But he thought it had more to do with innocence. Hers *and* his. Paring hers down, shoring his up. There was even more to it, though. You could never figure anything out, never say anything. The second you did, it became a lie, the truth shrunk to fit your words. He ran his thumb across the bills. They felt cool and slick, like strange skins. Twenty-four thousand. What if some opportunity came up, some big score?

Well, he'd have the one night, anyway.

Find a slim brown girl who'd fuck him mean and burn out the last sugars of Huayacuatia.

He swallowed one upper, then did another.

Out in the blood-red light, the wild laughter and crazy music, he walked briskly down Avenida Juarez toward the border. Every rut brimmed with shadow. In a house with black curtains a baby was screaming. Even with those curtains, crimson light penetrated and made it hard to sleep, and even when you slept, the light brought dreams that scared you awake. But the dreams made you strong, and it would be a strong baby, strong enough to dream about crossing that light.

The side wall of La Manzanita was six feet from the border. Before going in, Chapo stood an arm's length away, facing the shimmering redness. He'd seen guys jump into it, others just stroll on through. Drunks, suicides, men who believed the border was the door to a kind of afterlife. He'd had the urge himself to take that stroll. But no more. He felt satisfaction in being able to face it and not know that urge. Its hum and sizzle no longer an allure, no longer a humiliation, a weakness. Borders were everywhere, and once you recognized that, you could be strong in spite of them . . . or because of them. This unreal fire might be the least of borders. That much he'd learned on the trip to Huayacuatia, that much was true enough to say and not diminish. And having this one powerful truth was more important than having the money or Anise. It gave him a new purchase, a new perspective. He thought if he kept staring into the red glow, he would see the evolution of that truth.

He took out the brujo's knife, its enamel the same color as the border. Considered tossing it through. Magic, huh? Would it penetrate, would its flight curve around buildings and find a secret target? After a moment, he decided to hang onto it.

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Save it for some special bad heart.

"Chapo!"

Rafael was coming toward him, knife in hand. His jaw still bruised from where Chapo had nailed him with the shopping bag. He dropped into a crouch, cut lazy crescents in the air.

No easy way out this time.

Chapo tried to flick the red knife open, but the blade stuck.

Brujos! Chapo silently cursed Don Augustin.

They circled each other, shoes hissing in the dirt, breath ragged. All the other sounds went away.

In the first thirty seconds Chapo took a slice on his left arm. It wasn't serious, it focused him. He sucked up the pain and studied Rafael's moves. Rafael grinned to see the blood.

Keep grinnin', asshole, Chapo said to himself.

He shook his guard arm, pretending it was bothering him.

Rafael went for the opening.

Chapo sidestepped the lunge, tripped Rafael and sent him slamming into the wall of La Manzanita. As he slumped down, the knife slipping from his fingers, Chapo grabbed him in a chokehold. Lugged him toward the border. Held him up inches away. He hadn't been angry during the fight, but now he was almost sick with anger.

Rafael was too close to the red glow to want to struggle. He twisted his head, trying to see Chapo. Even the sweat beading his forehead shone red. Dull chubby face clenched in fear. But he wasn't going to beg. Code of the Crust. He'd die stupid and macho.

That was what drained off Chapo's anger, the recognition of his own stupidity, of a poverty that left you only with a fool's pride and a talent for dying. He dragged Rafael away from the border and let him fall. Rafael couldn't believe it. He stared at Chapo, uncomprehending.

To use strength wisely—that's the only happiness you can know.

Chapo could have sworn that he heard Don Augustin's voice speaking those words, and thought that if the knife had opened, he would never have come to this moment. The brujo might have done him a favor. He studied Rafael. "Wanna go to La Manzanita?" he asked.

"La Manzanita?" Rafael blinked, confused.

"Yeah, I did some business last week. Gonna celebrate."

"You want me to go with you?"

"Yeah, sure."

"Why?" Rafael said after a pause, suspicious. "Why you doin' this?"

" 'Cause this"—Chapo flourished his knife—"it's stupid. Why we gotta do it? What's the point?"

"You slugged me, man!"

Chapo displayed his bleeding arm. "We're even, okay?"

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Rafael wasn't satisfied. "What kinda business give you the coin for La Manzanita?"

"Maybe I'll tell you sometime, maybe we'll do some business."

That appeared to stun Rafael. Nobody did business with him. He was too slow-witted to be slick. But, Chapo thought, maybe he could be loyal. Maybe he was born to be loyal, and no one had ever offered him a chance. It rang true. And loyalty could make up for a lot. He kicked Rafael's knife over to him. "Let's do it," he said.

Rafael picked up the knife. There was a moment. It showed in his eyes, glowing red like a little border. But the moment passed. "Okay," he said, pocketing the knife. He came to his feet, smiling. The smile was genuine, a signal as open and honest as a dog wagging its tail. Chapo wasn't ready to buy it . . . not all the way. But he did buy the concept that had produced it, and he was beginning to enjoy the feeling of control.

"La Manzanita!" said Rafael, looking at the building. "Man, I hear they got women in there can tie a knot in it, y'know. Man!"

"Let's find out," said Chapo.

"You go there a lot?" Rafael asked.

"Naw, man. Too much make you crazy . . . be bad for doin' business."

Rafael nodded sagely, like Oh, yeah, he knew all about that.

Chapo clapped him on the back, tried to steer him toward the door; but Rafael balked, suspicion visible in his face.

"What's wrong?" Chapo asked.

"This don't make no sense, man," said Rafael.

"What you think . . . I'm gonna pay somebody to screw you to death?"

Rafael didn't respond to the joke, engaging Chapo's eyes soberly.

"Look," said Chapo. "Just 'cause we ain't killin' each other don't mean it don't make sense. You got anything better goin? I mean don't tell me you ain't taken chances for a lot less reward."

Rafael's hand snaked into the pocket where he kept his knife.

All Chapo's instincts cried out for him to open Rafael up for the flies; but he realized he had come to the end of those tactics. They brought you temporary survival, and that had always been enough for him. But now he wanted . . . he wasn't sure exactly what. Power for a start, and then something more. This hassle with Rafael was a test he had to pass.

"Hey," he said, throwing an arm around Rafael's shoulder. "You wanna cut me, or you wanna lie down on silk? You wanna watch me bleed, or you wanna hear a sugar voice sayin', 'Oh, Rafael! You so fine!' C'mon, man! We'll have a good time tonight, and then tomorrow we can get back to killin' each other. Or maybe not. Maybe we'll catch fire inside, maybe we'll find out we can burn together."

Rafael's muscles relaxed, and he giggled, getting behind Chapo's rap. "Yeah," he said. "Maybe we cross the border, cut some gringos."

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"Shit!" said Chapo. "We gonna do more'n that, man." He spat at the border, and for a second he believed his spit would dissolve the fire instead of merely sizzling and vanishing, revealing a fabulous unknown America, a place of golden women with jeweled eyes and occult powers. "We gonna raid the secret tower, bring back the magic dagger. Know what I'm talkin' 'bout?"

"Yeah!" said Rafael gleefully, jittering with excitement. "Yeah!"

"We gonna dance on the moon, we gonna break the silver chains and loose the final beast."

From behind them came a shriek, curses. An old man dressed in the cotton trousers and shirt of a campesino was lunging toward the border, trying to hurl himself into it, while an old woman clung to him, dragging him back. A crowd was gathering, hemming them in against the shimmering curtain of energy. They laughed, talked, pointed. The old woman called on God and the Virgin for help, her cries as shrill as those of a frightened bird.

"Shit!" said Rafael, and spat. "I hate that weak shit, man! People ain't got the strength to deal, they might as well be dead, y'know."

Chapo started to say he had come to realize that what was usually considered strength sometimes was a weakness and vice versa; but on second thought, he decided it would be better for Rafael to remain ignorant of subtleties such as this. They were not friends, after all, only partners in crime. "Yeah," he said, pushing Rafael toward the entrance of the club. "Fuck 'em! We ain't got to worry 'bout bein' weak, right?"

Laughter and soft music issued from the door of La Manzanita. White light veiled the threshold. Together, Chapo and Rafael crossed over.●

CURSE OF THE DEMON'S WIFE

She dreads the scaly amours
of his infernal touch more
than his eternal indifference.
Each time he returns home

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from his nefarious calling,
he calls her to their bed
and elaborates upon life
and skullduggery in the

world above, he complains
of Lucifer himself and
the partisan politics of
the netherworld, of how

he has been passed over
again, and then he raises
one huge and horny palm
against the flesh of her

side, and she starts to
quiver in what he mistakes
for passion, so he slowly
sates his own in rounds

and conjurings of perverse
imagination, her long nails
splintering on his glossy
impenetrable hide, cries

rising in the dank forest
where their mansion stands,
where the nocturnal trees
bloom on for centuries,

where their long departed
children, no longer demons,
no longer fiendish and sad,
are faces in the branches.

—Bruce Boston

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VIEWPOINT

Gregory Benford, the well-known and much acclaimed science fiction author, is a highly respected scientist and science writer. His science articles have appeared in *Smithsonian, Natural History,* and *Omni,* and he has published entries on relative plasma physics and astrophysics in the *Encyclopaedia Britannica.* In the following article, he combines both his authorial skills to give us this fascinating speculative look at . . .

THE FUTURE OF THE JOVIAN SYSTEM

by
Gregory Benford
art: Bob Eggleton

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VIEWPOINT

Father of all! in every age,
In every clime ador'd,
By saint, by savage, and by sage,
Jehovah, Jove, or Lord!
—ALEXANDER POPE

HOW THE SOLAR SYSTEM WAS WON

They said, of course, that it was impossible. They always do.

Even after the human race had moved into the near-Earth orbits, scattering their spindly factories and cylinder-cities and rock-hopping entrepreneurs, the human race was dominated by nay-saying stay-at-homes. Sure, they said, space worked. Slinging airtight homes into orbit at about one astronomical unit's distance from the Sun was—in retrospect—an obvious step. After all, there was a convenient moon nearby to provide mass and resources. But Earth, they said, was a benign neighborhood. You could resupply most outposts within a few days. Except for the occasional solar storm, when winds of high energy particles lashed out, the radiation levels were low. There was plenty of sunshine to focus with mirrors, capture in great sheets of conversion wafers, and turn into bountiful, high-quality energy.

But Jupiter? Why go *there?* Scientific teams had already touched down on the big moons and dipped into the thick atmosphere. By counting craters and taking core samples, they deduced what they could about how the solar system evolved. After that brief era of quick-payoff visits, nobody had gone back. One big reason, everyone was quick to point out, was the death rate in those expeditions: half never saw Earth again, except as a distant blue-white dot.

Scientists don't tame new worlds; pioneers do. And except for the bands of religious or political refugee-fanatics, pioneers don't do it for nothing. To understand why mankind undertook the most dangerous development project in its history (so far), you have to ask the eternal question: Who stood to make a buck out of it?

By the year 2124 humans had already begun to spread out of

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the near-Earth zone. The bait was the asteroids—big tumbling lodes of metal and rock, rich in heavy elements. These flying mountains could be steered slowly from their looping orbits and brought into near-Earth rendezvous. The Delta V wasn't all that large.

There, smelters melted them down and fed the factories steady streams of precious raw materials: manganese, platinum, cadmium, chromium, molybdenum, tellurium, vanadium, tungsten, and all the rare metals. Earth was running out of these, or else was unwilling to pollute its biosphere to scratch the last fraction out of the crust. Processing metals is messy and dangerous. The space factories could throw their waste into the solar wind, letting the gentle push of protons blow it out to the stars.

Early in the space-manufacturing venture, people realized that it was cheaper in energy to tug small asteroids in from the orbits between Mars and Jupiter than to lift them with mighty rocket engines from Earth. Asteroid prospecting became the gold rush of the late twenty-first century. Corporations grubstaked loners who went out in pressurized tin cans, sniffing with their spectrometers at the myriad chunks. Most of them were duds, but a rich lode of vanadium, say, could make a haggard, antisocial rockrat into a wealthy man. Living in zero-gravity craft wasn't particularly healthy, of course. You had to scramble if a solar storm blew in and crouch behind an asteroid for shelter. Most rock-hoppers disdained the heavy shielding that would ward off cosmic rays, figuring that their stay would be short and lucky, so the radiation damage wouldn't be fatal. Many lost that bet. One thing they could not do without, though, was food and air. That proved to be the pivot-point that drove humanity still further out.

Life runs on the simplest chemicals. A closed artificial biosphere is basically a series of smouldering fires: hydrogen burns (that is, combines with oxygen) to give water; carbon burns into carbon dioxide, which plants eat; nitrogen combines in the soil so the plants can make

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VIEWPOINT

"From Ceres . . . Jupiter looks like a candy-striped beacon. . . . The rockrats lived in the broad band between two and three astronomical units out from the sun—they were used to wan, diminished sunshine and had already been tutored in the awful cold. For them it was no great leap to Jove . . ."

proteins, enabling humans to be smart enough to arrange all this artificially.

The colonies that swarm in near-Earth orbits had run into this problem early. They needed a steady flow of organic matter and liquids to keep their biospheres balanced. Supply from Earth was expensive. A better solution was to search out the few asteroids which had significant carbonaceous chondrites—rock rich in light elements: hydrogen, oxygen, carbon, nitrogen. There were surprisingly few. Most were pushed painfully back to Earth orbit and gobbled up by the colonies. By the time the rock-hoppers needed light elements, the asteroid belt had been picked clean. Besides, bare rock is unforgiving stuff. Getting blood from a stone was possible in the energy-rich cylinder-cities. The loose, thinly spread coalition of prospectors couldn't pay the stiff bills needed for a big-style conversion plant.

From Ceres, the largest asteroid, Jupiter looms like a candy-striped beacon, far larger than Earth. The rockrats lived in the broad band between two and

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three astronomical units out from the sun—they were used to a wan, diminished sunshine and had already been tutored in the awful cold. For them it was no great leap to Jove, hanging there 5.2 times farther from the Sun than Earth.

They went for the liquids. Three of the big moons—Europa, Ganymede, and Callisto—were immense iceballs. True, they circled endlessly the most massive planet of all, three hundred and eighteen times the mass of Earth. That put them deep down in a gravitational well. Still, it was far cheaper to send a robot ship coasting out to Jupiter and looping into orbit around Ganymede than it was to haul water from the oceans of Earth. The first stations set up on Ganymede were semi automatic—meaning a few unlucky souls had to tend the machinery.

If they could survive at all. A man in a normal pressure suit could live about an hour on Ganymede. The unending sleet of high-energy protons would fry him, ripping through the delicate cells and spreading red destruction. This was a natural side-effect of Jupiter's hugeness—its compressed core of metallic hydrogen spins rapidly, generating powerful magnetic fields that are whipped around every ten hours. These fields are like a rubbery cage, snagging and trapping particles (mostly protons) spat out by the sun. Io, the innermost large moon, belches ions of sulfur and sodium into the magnetic traps, adding to the protons. All this rains down on the inner moons, sputtering the ice.

It was not enough to burrow under the ice to escape. The crew had to work outside, supervising robot ice-diggers. The first inhabitants of Ganymede instead used the newest technology to fend off the proton hail: superconducting suits. Discovery of a way to make superconducting threads made it possible to weave them into pressure suits. The currents running in the threads made a magnetic field outside the suit, where it brushed away incoming protons. Inside, by the laws of magnetostatics, there was no field at all to disturb instrumentation. Once started,

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the currents flowed forever, without electrical resistance.

Those first men and women worked in an eerie dim sunlight. Over half of Ganymede's mass was water ice, with liberal dollops of carbon dioxide ice, frozen ammonia and methane, and minor traces of other frozen-out gases. Its small rocky core was buried under a thousand-kilometer-deep ocean of water and slush. The surface was a thin seventy-kilometer-deep frozen crust, liberally sprinkled by billions of years of infalling meteors. These meteorites peppered the surface and eventually became a major facet of the landscape. On top of Ganymede's weak ice crust, hills of metal and rock gave the only relief from a flat, barren plain.

This frigid moon had been tugged by Jupiter's tides for so long that it was locked, like Luna, with one face always peering at the banded, ruddy planet. One complete day-night cycle was slightly more than an Earth-week long. Adjusting to this rhythm would have been difficult if the Sun had provided clear punctuation to the three-and-a-half-day nights. But even without an atmosphere, the Sun from Ganymede was a dim twenty-seventh as bright as at Earth's orbit. Sometimes you hardly noticed it, compared to the light of Jove's nearby moons.

Sunrise was legislated to begin at Saturday midnight. That made the week symmetric, and scientists love symmetry. Around late afternoon of Monday, Jupiter eclipsed the Sun, seeming to clasp the hard point of white light in a rosy glow, then swallowing it completely. Europa's white, cracked crescent was then the major light in the sky for three and a half hours. Jupiter's shrouded mass flickered with orange lightning strokes between the rolling somber clouds. Suddenly, a rosy halo washed around the rim of the oblate atmosphere as sunlight refracted through the transparent outer layers. In a moment the Sun's fierce dot broke free and cast sharp shadows on the Ganymede ice.

By Wednesday noon it had set, bringing a night that was dominated by Jupiter's steady glow as it hung unmoving in the

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sky. This slow rotation was still enough to churn Ganymede's inner ocean, exerting a torque on the ice sheets above. A slow-motion kind of tectonics had operated for billions of years, rubbing slabs against each other, grooving and terracing terrain, erasing craters in some areas.

In the light gravity—one-seventh of Earth's—carving out immense blocks of ice was easy. Boosting them into orbit with tug rockets was the most expensive part of the long journey. From there, electromagnetic-thruster robot ships lugged the ice to the asteroids, taking years to coast along their minimum-energy spirals.

AGRIBUSINESS IN THE SKY

"Ice might be nice, but wheat you can eat."

So began one of the songs of that era, when the asteroids were filling up with prospectors, then miners, then traders. Then came settlers, who found the cylinder-cities too crowded, too restrictive, or simply too boring. They founded the Belt-Free State, with internal divisions along cultural and even family lines. (Susan McKenzie, the first Belt Chairwoman, was three generations removed from her nearest Earth-native Scots relative. Not that Belters stopped to think about Earth that much anymore.)

By then the near-Earth orbital zone was as comfortable as a suburb, and as demanding. The few iceteroids available in the asteroid belt had already been used up, but ice from Ganymede, originally hauled to the asteroids, could be revectored and sent to the rich artificial colonies. As the colonies developed a taste for luxury, increasingly that meant food. No environment can be completely closed, so human settlements throughout the solar system steadily lost vapors and organic matter to the void. No inventory ever came up one hundred percent complete. (Consider your own body, and try to keep track of a day's output: feces, urine, exhaled gas, perspiration, flatus, sheddings. Draw the flow chart.) The relatively rich inner-solar-system colonies soon grew tired of

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skimpy menus and the endless cycle in which goat and rabbit and chicken were the prized meats.

Inevitably, someone noticed that it would be cheap to grow crops on Ganymede. Water was plentiful, and mirrors could warm greenhouses, enhancing the wan sunlight. Since Ganymede was going to ship light elements to the asteroids and beyond anyway, why not send them in the form of grains or vegetables?

Thus began the Settlements. At first they were big, domed greenhouses, lush with moist vegetables or grain. The farmers lived below in the sheltering ice. Within two generations humans had spread over a third of the moon's purplish, grooved fields. In the face of constant radiation hazard, something in the human psyche said *mate!*—and the population expanded exponentially.

Robot freight haulers were getting cheaper and cheaper, since the introduction of auto-producers in the Belt. These were the first cumbersome self-reproducing machines, sniffing out lodes of iron and nickel and working them into duplicates of themselves. An auto-producer would make two replicas of itself and then, following directives, manufacture a robot ion rocket. This took at least ten years, but it was free of costly human labor, and the auto-producers would work in lonely orbits, attached to bleak gray rocks where humans would never last. The ion rocket dutifully launched itself for Ganymede, to take up grain-hauling chores. Every year there were more of them to carry the cash crops sunward.

Working all day in a skinsuit is not comfortable. Day-to-day routines performed under ten meters of ice tend to pall. Fear of radiation and cold wears anyone down. For the first generation Ganymede was an adventure, for the next a challenge, and for the third, a grind. One of the first novels written in Jovian space opens with:

> Maybe I should start off with a big, gaudy description. You know—Jupiter's churning pinks and browns, the swirling white ammonia clouds like giant hurricanes, the spinning red spots. That

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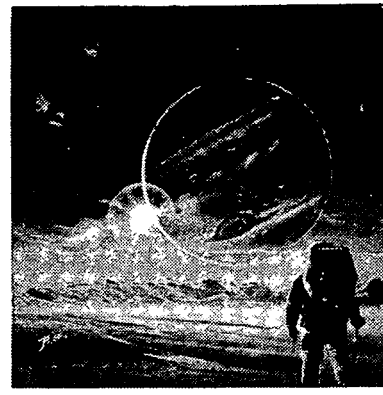
kind of touristy stuff.

Except I don't feel like writing that kind of flowery crap. I'm practical, not poetic. When you're swinging around Jupiter, living meters away from lethal radiation, you stick to facts. You get so vectors and grease seals and hydraulic fittings are more important than pretty views or poetry or maybe even people.

The psychological profile of the entire colony took a steep downward slope. Even the kids in the ice-warren streets knew something had to be done.

In the long run no large colony could live with the death-dealing threats to be found on any of the Jovian moons. Therefore, erase the dangers.

All sorts of remedies were suggested. One serious design was done for an immense ring of particles to orbit around Ganymede, cutting out most of the incoming high-energy protons. Someone suggested moving Ganymede itself outward, to escape the particle flux. (This wasn't crazy, only premature. A century later it would be feasible,



"Working all day in a skinsuit is not comfortable. Day-to-day routines performed under ten meters of ice tend to pall. Fear of radiation and cold wears anyone down. For the first generation Ganymede was an adventure, for the next a challenge, and for the third, a grind."

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though still expensive.) The idea that finally won looked just as bizarre as the rest, but it had an ace up its sleeve.

The Ganymede Atmosphere Project started with a lone beetle-like machine crawling painfully around the equator of the world. Mechanical teeth ground up ice and sucked it inside, where an immense fusion reactor waited. The reactor burned the small fraction of heavy water in the ice and rudely rejected the rest as steam. From its tail jetted billowing clouds that in seconds condensed into an ammonia-rich creek.

This fusion plant crept forward on caterpillar treads, making a top speed of a hundred meters an hour. Its computer programs sought the surest footing over the black-rock outcroppings. It burned off toxic gases and left a mixture of water vapor, ammonia, oxygen, and nitrogen, with plenty of irritating trace gases. The greatest danger to it was melting itself down into a self-made lake. A bright orange balloon was tethered to the top. If the crawler drowned itself, the balloon would inflate and float the plant to the surface, to be fished out by a rescue team.

The trick was that the fusion-crawler wasn't made with valuable human labor, but rather by other machines: the auto-producers. Decades before, the auto-producers had begun multiplying like the legendary rabbits who invaded Australia. Now there were hundreds of them in the Belt, duplicating themselves and making robot freighters. The Belters were beginning to get irritated at the foraging machines; two had been blown to fragments for trespassing on Belters' mines. Simple reprogramming stopped their ferocious reproduction and set them to making fusion-crawlers.

Freighters hauled the crawlers out to Ganymede, following safe, cheap low-energy trajectories. The crawlers swarmed out from the equator, weaving through wrinkled valleys of tumbled stone and pink snowdrifts, throwing out gouts of gas and churning streams. The warm water carried heat into neighboring areas, melting them as well. A thin gas began to form over the tropics. At first it condensed out in the

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Ganymede night, but then it began to hold, to spread, to take a sure grip on the glinting ice lands below.

The natives saw these stolid machines as a faint orange aura over the horizon. Crawlers stayed away from the Settlements, to avoid accidents and flooding. Their rising mists diffused the fusion torch's light, so that a second sun often glowed beyond the hills, creeping northward, its soft halo contrasting with the blue-green shadows of the ice fields.

HELP WANTED: MUTANTS

An atmosphere can blunt the energy of incoming protons and screen against the still-dangerous sun's ultraviolet, but to be breathable it has to be engineered. Once a tiny fraction of the ice plains were melted into vapor, a greenhouse effect began to take hold. Sunlight striking the ice did not reflect uselessly back into space; instead, the atmosphere stopped the infrared portion, trapping the heat. Once this began, the fusion-crawlers were a secondary element in the whole equation.

The fresh ammonia streams and methane-laced vapors were deadly to Earth-based life. A decade after the first fusion-crawler lumbered through a grooved valley, hundreds of them scooped and roared toward Ganymede's poles, having scraped off a full hundred meters of the ice crust. They had made an atmosphere worth reckoning with. Ice tectonics adjusted to the shifting weight, forcing up mountains of sharp shards, uncovering lodes of meteorites, which in turn provided fresh manufacturing ore for yet more fusion-crawlers.

The first rain fell. A slight mist of virulent ammonia descended on the Zamyatin Settlement. It collected on a dip in the main dome, dissolving the tenuous film on it. After some hours the acid ate through. A *whoosh* of lost pressure alerted the agriworkers. They got out in time, but these were farsighted people; they knew one accident wasn't reason to kill the project that gave them so much hope.

The only solution was to change the atmosphere as it was made. Further rains underlined

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VIEWPOINT

"The central authority on Ganymede, Hiruko Station, introduced a whole catalog of high-biotech beings who could survive in the wilds of near-vacuum and savage chemicals. Hiruko Station's method was to take perfectly ordinary genes of Earthside animals and splice them together. . . . The interaction of these genes were decidedly nonlinear: when you add a pig to an eel, flavor with arachnid, and season with walrus, do not expect anything cuddly or even recognizable."

the point—it became harder to work outside because the vapors would attack the monolayer skinsuits. The fusion plants were no help. They were hopelessly crude engines, chemically speaking, spewing out vapors that had been laid down three billion years before, when the moon formed. They could not edit their output. As they burrowed deeper into the ice fields, the situation worsened.

Io, the pizza planet, had once enjoyed a more active stage. Its volcanoes had belched forth plumes of sulfur that had escaped the moon's gravity, forming a torus around Jupiter that included all the moons. On Ganymede this era was represented by a layer of sulfur that occasionally found its way into the crawlers' yawning scoops. The result was a fierce yellow rain that seared whatever it touched. Fifty-seven men and women died in the torrents before something was done.

The fusion-crawlers had been a fast and cheap solution because of self-reproducing machines. The answer to bioengineering of the atmosphere lay in a tried-and-true method: self-reproducing

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animals. But these creatures were unlike anything seen on Earth.

The central authority on Ganymede, Hiruko Station, introduced a whole catalog of high-biotech beings who could survive in the wilds of near-vacuum and savage chemicals. Hiruko Station's method was to take perfectly ordinary genes of Earthside animals and splice them together. This began as a program in controlled mutation but rapidly moved far beyond that. Tangling the DNA instructions together yielded beings who could survive extreme conditions. The interactions of those genes were decidedly nonlinear: when you add a pig to an eel, flavor with arachnid, and season with walrus, do not expect anything cuddly or even recognizable.

There were gravel-gobblers, who chewed on rocky ices heavy with rusted iron. They in turn excreted a green, oxygen-rich gas. The scooters came soon after, slurping at ammonia-laden ice. These were pale yellow, flat shapes, awkward and blind on their three malformed legs. They shat steady acrid streams of oxy-available mush. Hiruko Station said the first plant forms could live in the bile-colored scooter stools. Eventually, plants did grow there, but they weren't the sort of thing that quickens the appetite.

Both gravel-gobblers and scooters were ugly and dumb, hooting aimlessly, waddling across the fractured ice with no grace or dignity, untouched by evolution's smoothing hand. They roved in flocks, responding to genes that knew only two imperatives: eat and mate. They did both with a furious, single-minded energy, spreading over the ice, which was for them an endless banquet.

Hiruko Station liked the results, and introduced a new form—rockjaws—that consumed nearly anything, inhaled ammonia vapor, and exhaled oxygen and nitrogen. Rockjaws could bite through meteorites. Metallic jaws were the key. The high-biotech labs that had turned up a method of condensing metal in living tissue, making harder bones possible.

Rockjaws were smart enough to stay away from the Settlements (unlike the others, who

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constantly wandered into greenhouses and tried to eat them). At this point the long-chain DNA-tinkering of Hiruko Station ran afoul of its own hubris. The rockjaws were *too* smart. They were genetically programmed to think the loathsome methane ices were scrumptious, but they also saw other delicacies moving around nearby: gravel-gobblers. And they were smart enough to hunt these unforeseen prizes.

Hiruko Station later excused this miscalculation as an unfortunate side-effect of the constant proton sleet, which caused fast genetic drift and unpredictable changes. Hiruko Station pointed to the big inflamed warts the creatures grew and the strange mating rituals they began to invent—none of it in the original coding. The scooter flocks were showing deformities, too. Some seemed demented and took to living off the excretion of the gravel-gobblers, like pigs rooting in cowflop.

First Hiruko Station tried introducing a new bioengineered animal into the equation. It was a vicious-looking thing, a spider with tiny black eyes and incisors as big as your finger. It stood three meters high and was forever hungry, fine-tuned to salivate at the sight of any mutation of the normals. This genetically ordained menu was quite specific, so it was the first thing to go wrong with the ugly beast. Pretty soon it would hunt down and eat anything that moved—even humans—and Hiruko Station had to get rid of it. That was what led to the solution. The only way to exterminate the spiders was by hunting them down. Men in the Settlements volunteered for the duty. After some grisly incidents, they had grudges to settle, and anyway it gave them a reason to get out of the domed regularity of their hothouse gardens and manicured fields. Thus was revived a subculture long missing from Earth: the hunt, with its male bonding and reckless raw life in the wilderness. As a novel of the time opened:

> They went out from Sidon Settlement in a straggling band, clanking and crunching over the hard-packed, worn-down purple plain. The ice near Sidon had been melted

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and frozen and remelted again and again by orbit shuttle landings and by the heater exhausts of passing crawlers, so that now it was speckled and mottled with rainbow splashes and big blotches of contaminants. Out over this crusty trampled land they went, and inside their wheezing and huffing machines they sang and shoved each other and early got into the smeerlop and whiskey, as they always did.

These disorderly bands exterminated the spiders within a year. Hiruko Station found it was cheaper to pay the hunters to track down and destroy aberrant scooters and rockjaws and gravel-gobblers than it was to try for a technological fix. The Settlements were tradition-steeped societies—internal discipline is essential when an open valve door or clogged feed line can kill a whole community. The atmosphere thickened. Hiruko Station added more mutant strains of quick-breeding animals to the mix, driving the chemical conversion still faster. The biotechnicians found a way to implant microprocessors into the animals, so that they didn't get out of control. That was expensive, though, so hunting continued, echoing the heritage of mankind that came down from the plains of Africa. Bounty hunters were hard to fit into the labor scheme, and the socioplanners kept trying to phase them out. Earthside 3D programs lapped up tales of the rough-'n'-ready bountymen (and bountywomen), giving what the planners felt was a "false image." Mutation was rapid, however, and the biosphere was never truly stabilized. The hunters became an institution. To this day, they are an unruly crew who don't fit into orderly diagrams.

Rain lost its sulfuric tang. Steam rose at morning from the canyons, casting rosy light over the Settlements. The moon's first rivers cut fresh ravines and snaked across ice plains.

All this hung in delicate balance. Huge sodium-coated mirrors were spread in orbit nearby, to reflect unceasing light on the paths ahead of the fusion-crawlers. This speeded evaporation and was used also to hasten crops to ripeness. But Ganymede was, after all, an ice

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world. Too much heating and a catastrophic melting of the crust would begin. If the crust broke or even shifted, moonquakes would destroy the Settlements.

Thus it was a careful hand that started up the first Ganymede weather cycle. Solar heating at the equator made billowing, moist clouds rise. They moved toward the poles as colder air flowed below, filling spaces the warm air left. As they moved, masses of warm clouds dropped sheets of rain. This meant there was only one circulation cell per hemisphere, an easier system to predict than the several-cell scale of Earth. Rainfall and seasons were predictable; weather was boring. As many on Luna and in the asteroids had learned, low gravity and a breathable atmospheric pressure gave a sensational bonus: flying. Though Ganymede would always be cold and icy, people could soar over the ice ecology on wings of aluminum. Compared to the molelike existence of only a few generations before, this was freedom divine.

There came at last the moment when the air thickened enough to absorb the virulent radiation flux. Years later, a foolhardy kid stepped outside an airlock five hours before the official ceremony was to begin, and sucked in a thin, piercingly cold breath. She got back inside only moments before oxygen deprivaton would have knocked her out, but she did earn the title she wanted: first to breathe the free air of Ganymede. Molecules locked up for billions of years in the ice now filled the lungs of a human. She was fined a month's labor credit by her Settlement.

By this time Europa's cracked and cratered face was alive with the tiny ruby dots of fusion-busters, chewing away at that moon as well. They crawled along the cracks that wrapped the entire moon, melting the walls away, hoping to open the old channels below the cracks. The churning slush below burst forth here and there, spreading stains of rich mineral wealth. Jove itself, hanging eternally at the center of the sky, was now the only face unmarked in some way by mankind.

Not to be outdone, the Republic of Ganymede hastened the heating of their air. They laid a monomolecular layer over the top

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of the atmosphere, spinning it down from orbit, letting it fall until it was supported by the pressure from below. This gossamer film stopped the lighter molecules from escaping first, keeping the chemical balance of the air and speeding the greenhouse effect. The designers left holes big enough for orbital tugs to slip through. From the ice fields below, Callisto and Europa and Io now carried a gauzy halo of scattered light.

The first lake on Ganymede formed in a basin of meteorite rock eight kilometers wide. This created a ready source of fresh water and an almost resortlike atmosphere to the spot. Sailing and even swimming became fashionable. Agribusiness boomed, driven by more and more mirrors that augmented the natural sunlight.

Trade with the asteroids increased. Stations around distant Saturn were supplied from Ganymede, and research satellites out as far as Pluto. The exploration of gloomy, ruddy Titan was complete, and some peole were talking about trying to make a go of it at the bottom of that chilly organic soup. By then Ganymede was the luxury world of the outer system. The pioneers had moved on, long before the first Hilton went up.

Some moons were set aside as natural preserves, where selected tourists and scientific teams could see the way the ice worlds had once been. Other rocky moonlets were kept aside, in case future scientists had new methods of studying this primordial matter. The first ecological movements began, seeking to preserve the original bleak wastes wherever they remained.

As always, it was a battle of economics. The moons that later boiled off their atmospheres had to compete with Ganymede. Their most brilliant stroke lay in *not* applying the insulating monolayer. Without it, they could profit from the new asteroid importation business.

Some chunks of useful mass (nickel, iron, silicates rich in rare ores, the usual) orbited near or beyond Jupiter—the Trojan and Transjovian groups. Manufacturers argued that it was cheaper to make metal-rich products on Ganymede than to import them from the asteroids, particularly now that the

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VIEWPOINT

McKenzie Conglomerate was upping the prices in a monopoly market. Trouble was, they needed the metals, and the McKenzies owned everything in sight. But the Transjovians were there for the plundering, if only they could be cheaply moved to near-Ganymede orbit.

The Europa entrepreneurs jumped into the fray. Since their atmosphere did not have a monolayer cap, they could send asteroids zooming through it. On these flybys the asteroids lost a lot of their unneeded momentum, making them easy to slip into orbits in Ganymede's neighborhood. They also heated up Europa's air and provided a valuable tourist attraction, with their well-choreographed displays of burnt gold, electric blue, and ruby amber. As the pilots of these rockships became more graceful, they began to carry passengers. Later, atmospheric grazing in protected suits became popular. In the freewheeling ethical climate of the time, bookings were permitted (indeed, the rates were even lowered) for those who signed on as suicides.

Sometime later, a large Earthside foundation proposed capping the Callisto atmosphere. They intended the largest work of art possible—a gaudy, beribboned design of loops and swirls that could be seen (properly magnified) throughout the solar system. The glorious monolayer film would have changeable polarization and colors, so that later generations of artists could express themselves through it.

This idea was opposed by a rare coalition of environmentalists —Keep Callisto Clean—and business interests, who wanted to horn in on Europa's atmospheric deceleration franchise. The foundation lost its zoning permit. Undeterred, they set about to move Pluto into a long, looping orbit, which passed through the inner solar system. Suitably decorated, they said, Pluto would make a magnificent touring art gallery.

Soon there was talk of starting a power-generating plant on Io. Not the volcanoes there—those had already been tapped. This plan proposed hooking directly into the currents that ran between Io and Jupiter itself—six million amperes of electricity just waiting to be used. Work began. Soon they would harness the

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energy that drove the aurora.

The forward vector of humanity had by now passed beyond the Jovian moons. Near Earth, the first manned starship was abuilding, soon to depart for Alpha Centauri. Given the engineering abilities of humanity, the matter of whether an Earth-like planet circled there seemed beside the point. (As it turned out, there was no such world within sixty-three light years). Humans could survive anywhere. Better, they would prevail and come to enjoy just about anything. Any place where sunlight and mass accumulated, there a human would find a way to form a roiling, catch-as-catch-can society—and probably make a profit doing it.

Of course, there was Jupiter itself. It and the other gas giant planets had formed the backdrop for all this drama, but that was all. Many a Ganymede native, perhaps as he lounged beside a lake in a heated skinsuit or banked and swooped through gossamer clouds, peered up at the swollen giant and idly wondered. Jupiter occupies two hundred and fifty times as much of the sky as Luna does from Earth; it was never far from the minds of the millions who lived nearby.

So it was inevitable. A physicist on Luna had developed a new theory of Jove's interior, accounting for all the latest data on pressure and temperature and chemical composition. She found that there had to be stratified bands of pure hydrogen metal near the surface of Jupiter. The hydrogen metal might be close to the outer layers of rock, near enough to mine.

Once squeezed into being by Jupiter's huge gravitational pressure, metallic hydrogen was a stable form. At great expense, laboratory tests created a few grams of the stuff. It was incredibly strong, light, and durable. It could even survive a slow transition to low pressure. If you could go down there and mine it . . .

The pressures deep in that thick Jovian atmosphere were immense. Where they were measured at all, the conditions were brutal. The technology for handling the mines was completely undeveloped. It was an insane idea.

They said, of course, that it was impossible. They always do. ●

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"The best car to smuggle reptiles in is a Subaru station wagon," Aurora said at the wheel of the car. "Because it's got four-wheel drive, and great brights so you can see them on the road at night, and because the panels come out easy. So you can hide the snakes and stuff behind them. I'm gonna get one when I can afford it."

I was sitting in the back seat of the car (which was, unfortunately for Aurora, only an old VW squareback) wondering how things had progressed this far. We had been on our way to get burgers when Aurora decided that, since it was such a nice summer day and everything, we should go down to Mexico and see if we could find some snakes to round out Aurora's collection. After all, she said, it was only a few hundred miles away. So we made a stop at the corner J.C. Penney's to buy pillowcases to put the snakes in, and headed out on Highway 5 to Baja, California.

Cassie, Aurora's sister, was sitting up front next to Aurora. Cassie was the reason I was on this trip in the first place. I had noticed her the minute she walked into my class in beginning calculus at the college. Everyone says you shouldn't date your students, and everyone is probably right, but within a month we were going out two or three times a week. And since I was just the teaching assistant, and not responsible for grades, we had nothing to quarrel about at the end of the semester when Cassie got a C in the class. She didn't even seem to mind all that much.

I sat still and looked at Cassie's orange-red hair flying out the window and tried to figure out if there was something I needed to do in the next few days. School was over so I didn't have classes. I badly wanted to take out my small pocket diary and flip through it but I knew what Cassie would say if I did. "Stop being so responsible all the time," she'd say. "We're on vacation. Put that book away."

Lately all our arguments had been about how obsessive (her word) I was, how childish (my word) she was. She was constantly late, not just once or twice but every single time. I hadn't seen the beginning of a movie since I started going out with her. So I didn't say anything when Aurora suggested going to Mexico. I wanted to prove that I could be as open to adventure as the rest of Cassie's crazy family. It occurred to me that Cassie had to go in to work tomorrow (she cleaned up at a day care center) but I said nothing and looked at her hair, brilliant in the sun. The sight of her hair made it all worthwhile.

"Did you bring the book?" Chris said. Chris was in Aurora's grade in high school and, like half the class (if the phone ringing day and night was any indication), found it impossible to resist Aurora's manic energy, her wild schemes. If Aurora was going to collect and trade illegal reptiles then she, Chris, was going to collect and trade illegal reptiles, too. The

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book, *The Field Guide to North American Reptiles and Amphibians,* had become Chris's bible.

"No, it's at home," Aurora said. "But don't worry. I know the ones we want."

On the other side of Chris sat Alan. Alan had said nothing for the past ten miles. Later it turned out that he was deathly afraid of snakes. But he was in love with Aurora, so what could he do? Poor boy. I knew exactly how he felt.

We stopped just this side of the Mexican border for our last hamburger and fries. It was 7:30. "We're making good time," Aurora said when we sat down to eat. "We should be at this place I know in a few hours. And we can spend the night driving up and down, and be back by tomorrow afternoon."

"What about sleep?" I said. Immediately I cursed myself. Someone setting out on the grand adventure wouldn't think of sleep.

"Who needs sleep?" Cassie said. I thought she looked a little disappointed in me.

"Certainly not you," I said, trying to make a joke of the whole thing. "Or the rest of your crazy family."

"What makes you think we're crazy?" Cassie said.

I thought she was being reasonable. That was my first mistake. I looked across the table at her red hair and brown eyes, both tinted with the same shade of gold, and I started to relax and enjoy the trip for the first time. If I could be with her it didn't matter where we were going. Anyway her eccentricities were only part of her charm. "Well, you know," I said. "Your great-uncle, what's-his-name, the one who thinks he's an Egyptian."

"He doesn't think he's an Egyptian," Cassie said. Alan was watching us glumly. Chris drew pictures of snakes on her napkin. "He's an Osirian. The cult of Osiris. He explained it all to you when you were over at the house."

"He didn't explain anything," I said. "He asked me questions. 'Knowest thou the name of this door, and canst thou tell it?' And then the lintel, and the doorpost, and the threshold—"

"You weren't listening," Cassie said. She still sounded reasonable. "If you know all the names you can get past the door into the land of the dead. And if you don't you're stuck. He's got to keep all that in his head. It's a long list."

"And you don't think that's a little strange?" I said. "That he believes all this."

"Well, what if he's right?" Cassie said. "I mean, millions of people used to believe in it. Maybe they knew something."

"Well, what about your grandmother?" I said. "She stays in her room

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for weeks on end and then she comes out and makes these cryptic utterances—"

"Look, Robert," Cassie said. Something passed between the two sisters then, something I was too much of an outsider to understand, and Aurora turned to Chris and started talking rapidly. The gold seemed to leave Cassie's eyes; they became flat, muddy. "Just because you came from a boring home doesn't give you the right to pass judgment on other people's families. Okay? I mean, I know your parents belonged to the right kind of religion and had the right kind of jobs and never said anything unusual or anything that would make you think, but that doesn't mean that everyone's family is like that. Some of us wouldn't want to be like that, okay? So you can just keep your stupid opinions to yourself."

"I'm sorry," I said. "I didn't mean—I was just joking around. I'm sorry."

Cassie turned away from me to talk to Aurora and Chris. Alan looked at me sympathetically, but I refused to catch his eye.

The rest of the trip was a nightmare. To my surprise we made it past the border guards with no problems. Sometime in the middle of the night we reached the place Aurora had heard about, with two snakes we had picked up along the way. Aurora and Chris were ecstatic; I didn't know why. I'm afraid one snake looks like another to me. Alan, rigid and wild-eyed, was starting to look like a speed freak. We found one more snake, put it in a pillowcase, put the pillowcases in the trunk and headed back. Then Aurora fell asleep at the wheel.

The car swerved, bounced over a few rocks and stalled. Aurora hadn't woken up. "Aurora?" Cassie said, shaking her. "Aurora?"

"Hmm. Mf," Aurora said.

We pulled her out and set her in Cassie's seat. I was hoping she didn't have a concussion. Naturally no one in the car was wearing a seat belt. Cassie drove a few more miles and then said, "God, I'm sleepy," and came to a dead stop in the middle of the one lane road.

"I'll drive!" Alan said, a bright note of desperation in his voice. Then he looked over Cassie's shoulder and leaned back, but not too far back. Ever since we'd put the snakes in the trunk his body hadn't made contact with the back of the seat. "Oh. Stick shift. I can't do it."

"Look," I said. "There was a big city just a few miles back. We'll find a hotel or a motel or something and get some sleep. All right?"

No one said anything. "Do you want me to drive?" I asked Cassie. "Or can you handle it? It's only a few more miles, I think."

"Sure, I can do it," Cassie said. She never stayed angry at anything for long. This always confused me; I come from a long line of grudge-holders.

The city was more than a few miles away, but we made it. Aurora,

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wide awake now, cheerfully told us about a man who had been bitten by a cobra and was immobilized just as he picked up the phone and started to dial the hospital. In the street outside a seedy one-story hotel we counted our money and discovered that among us we had eleven dollars and ninety-two cents. Wearily I went inside and found to my absolute amazement that they would take my charge card. I motioned Alan inside. We had already decided that the two men would rent the room and we would sneak the three women in later. I wanted as little trouble as possible. As I was stretching out on the floor, prepared to offer someone else the sagging double bed, I noticed Cassie and Aurora come in. Cassie lay on the floor next to me. In my sleep-fogged mind I thought the sacks Aurora was carrying were her luggage.

Cassie and I were the last ones up. We went outside and found the others at a restaurant down the street. None of them, it turned out, knew Spanish, and they had ordered in gestures and pidgin English. Despite all the warnings and jokes, each of them was drinking a glass of Mexican water. I wondered how they thought they were going to pay for the meal.

Aurora picked up one of the pillowcases scattered around her and looked inside. "Damn," she said. "One of the snakes escaped. I wonder if it's back at the hotel. Alan? Alan!" The poor kid's eyes had rolled up under his fluttering eyelids. "Well, if you're afraid of snakes you should have said something when we started out."

I hadn't had any water but I was sick for a week after we got home. Lying in bed with a hundred and two temperature I had time to think about the trip, go over the details, figure out how one thing led to another. I felt as though it had happened to someone else, someone who had far less of a grip on reality than I did.

That trip clarified things for me. Life just wasn't lived that way, the way Cassie and her family lived it. You didn't just jump in a car and drive to Mexico because you felt like it. What if I hadn't been there with my credit card? What if Aurora had gotten a concussion? I wanted something more for my life: order, sanity. I wanted to complete my studies, get my doctorate in math and get a job in industry.

I recovered, got busy with fall classes, and stopped calling her. I didn't consciously think that we had broken up but I'd think of her or her family from time to time with nostalgic regret. There was a guy who hung around their house—I don't know if he was part of the family or what—who had been in films as a saxophone player. The only thing was, he couldn't play the saxophone. He just *looked* like a saxophone player. So there'd be these close-ups of this guy and someone else on the sound

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track. I used to watch him practice, moving the saxophone this way and that without making a sound. It was eerie.

And I'd remember her great-uncle, asking Cassie to name some part of a doorway in ancient Egyptian. Sometimes she'd know the answer and he'd beam with satisfaction. Other times she wouldn't, and he'd shake his head sadly from side to side and say, "Cassandra, my pet, what will become of you?" Once I caught myself shaking my head with regret just thinking of him.

I probably would have called her eventually, but one day my office-mate's sister came wandering into the office looking for him and I ended up taking her out for coffee. Her name was Laura, and she was very sensible.

I was home, a few weeks after I'd started seeing Laura, when I heard a loud pounding at the door. I set down the *Journal of Multivariate Analysis* and got up. Once I'd unlocked the door to the apartment I wished I hadn't. It was Cassie.

"You want order in your life!" she said with no preamble. Her face was twisted and ugly, her brown eyes hard and flat. I tried to stop her but she pushed her way into the room. "Goddamn it, you want everything to be dull and predictable, you want to know what's going to happen in your life at every minute. Don't you?"

I couldn't think of anything to say.

"Well, don't you?" she said loudly. I knew enough about her to tell that she was on the verge of tears. "The way I live is too unpredictable for you, right? If somebody gave you a timetable of your life that told you everything that was going to happen from now until you die you'd welcome it, wouldn't you? Well?"

She reached into her purse and took out a small manila envelope. "Cassie, I—" I said.

"Well, here!" she said, thrusting the envelope at me. "I hope you're happy!"

A little dazed, I took it. It seemed too slight to be a timetable of my life. I reached inside and took out—photographs. Photographs of me.

She was turning to go. "Cassie," I said. "Where did you get these?"

"My grandmother!" she said, and broke away and ran loudly down the hall.

I took all the photographs out and looked at them after she had gone. There were only five of them. The first one showed me at my graduation walking across the stage in a cap and gown to receive my diploma. But I hadn't been at either of my graduations, not the one at my high school or the one at college where I had received my B.A. degree. I turned the picture this way and that, trying to figure out how it had been done.

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There were these odd details—the guy in front of me was in a wheelchair, for example—but on the whole it was very believable. The person on stage looked a lot like me.

The next picture showed me in an unfamiliar kitchen, pouring myself a cup of coffee. In the third one I was running down the street in the rain, a briefcase flying out from one hand. I looked harassed, and older too, in some indefinable way. The next one was a picture of me and a woman I had never met. We were in a tight embrace and I had a look of perfect peace on my face. The picture ended just below the neck, but I had the impression we were both naked. And in the last picture I was definitely older—at least thirty—and bending down to talk to a five- or six-year-old boy.

I ran the pictures through my hands, shuffling them like a deck of cards. So that's what Cassie's grandmother had been doing all those months in her room. She must have had a darkroom in there. I could see her bent over the photographs, cutting a head from this one, a background from that one, maybe retouching them, arranging them so that they looked like actual photographs. What a strange hobby. No wonder when she came out of her room she would say things like "The wind blows the skeleton of his lips."

I looked at the photographs again. Very nice, but I didn't see what the hell I was supposed to do with them. I put them back in the envelope, stuffed the envelope in a drawer and forgot about them.

There was a man in a wheelchair in front of me at my graduation. I felt vaguely uneasy when I saw him—he reminded me of something unpleasant but I couldn't remember what—but I managed to put him out of my mind. My parents had come out from Chicago to see me graduate—otherwise, I suppose, I wouldn't have gone to this graduation either—and at the reception afterward I introduced them to Laura and my friends without thinking too much about the ceremony. It was only when we were out to dinner that I remembered the photograph.

"What is it?" Laura said. "Is something wrong?" Later she told me that until she saw me that night she had never believed in the cliché "his jaw dropped."

"Nothing," I said uneasily, and, I guess, closed my jaw. Amazing, I thought. An amazing coincidence. I wondered what Cassie's grandmother would make of it. Cassie. I shook my head. I hadn't thought of her in months. "I just remembered something, that's all."

When I got home that night I pulled out all my drawers looking for the photographs. I found them at last, buried under the first few drafts of my dissertation. My fingers were shaking when I pulled the photographs out of the manila envelope.

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The scene in the photograph matched point for point with the scene on stage. It might almost have been a picture taken by someone in the audience. There was Dr. Miller, who had been hastily invited to speak when Dr. Fine became ill. There was my friend Larry walking across the stage behind me. You could see his sneakers under the edge of his gown; he hadn't had time to change his shoes. There was the guy in the wheelchair, rolling down the ramp off stage.

I felt as though someone had opened a window and let in a blast of cold air. I was shivering and had to sit down. How had the old lady done it? How on earth had she known?

I looked at the other photographs more intently than I'd ever looked at anything before. My hands were trembling badly. So that's what Cassie had meant. This was to be my life. Someday I'd live in a house with a kitchen like the one in the photograph. I'd have a job that involved carrying a briefcase. And in about ten years I'd talk to a boy about five or six years old. Could the boy be my son? At the thought I felt another chill wind through the room and I shuffled that photograph to the end of the pile.

The picture I looked at the longest, though, was the one of me and the woman embracing. Her face was just under my chin and turned in slightly toward my chest, but from what little I saw I thought she was beautiful. She had blonde, almost gold, hair cut very short, and fine delicate features. The one eye visible in the picture was closed. I thought she looked happy.

Surprisingly, my trembling had stopped. I accepted—somehow—that I was seeing scenes from my future, but the idea no longer frightened me. I saw nothing bad in these pictures, no death or grief or pain. In fact, the future seemed to hold only good things for me. A job, a house, a beautiful woman, perhaps a child.

If Cassie had hoped to frighten me with these photos, hoped somehow to win me back, she had badly miscalculated. It was with a feeling of profound satisfaction that I put the photographs in the manila envelope and put the envelope carefully back in the drawer.

After graduation I got a job with an aircraft company in a suburb of L.A. Feeling a little foolish, I carefully studied the briefcase in the photograph and then went out and got one just like it. I was looking at the photos about two or three times a week now, noting small details. The woman seemed to have small freckles scattered like stars across her face. The boy looked vaguely familiar, though if he were my son that wouldn't be surprising. A car was parked directly in back of him. There was a poster on the wall of the kitchen on which, after a week of effort, I could read the words "Save the Whales."

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Laura and I had several arguments around this time. None of them was very serious—I had thrown out a pamphlet she had given me without reading it, for example, or she disapproved of my choice of restaurants—but each time I would think, "The woman in the photograph wouldn't act this way." The woman in the photograph, I thought, was wise and loving and giving. After a while Laura and I drifted apart.

I began to date women for a week or a month and then drop them, secretaries from the aircraft company or women I'd pick up in singles bars in the Marina. One morning I woke up in an unfamiliar bed next to a woman I could barely remember and saw by her alarm clock that I had to be at work in an hour. I staggered out to her kitchen and poured myself a cup of coffee. It was only after I drank the coffee that I turned around and saw the Save the Whales poster tacked up on the wall.

I was buoyant all that day. Several people at work even asked me what I was smiling about. If another one of the pictures had come true, I thought, the rest couldn't be that far behind.

The next few months were probably the happiest in my life. I lived in a state of almost constant anticipation. At any moment I might see her, turning the corner or buying a pair of shoes. I invented names for her, Alexandra, Deirdre. I fantasized taking her home and showing her the photograph, telling her the story and seeing her eyes open wide in amazement. I worked hard, dated some, and spent long evenings running the photographs back and forth through my hands.

You can only anticipate for so long, though. Gradually, so gradually I barely noticed it, the photos became less and less important. I only looked at them once or twice a week, then once a month. I stopped holding my breath whenever I saw a woman with short blonde hair. I still felt that my future held something wonderful, that my life was more intense than most people's, but I no longer thought about why I felt that way.

After about five years I quit the aircraft company and went into consulting. I had saved some money, but the first year on my own was very rocky. Then I began to make a reputation for myself, and in the second year earned almost twice what I would have with the company. I bought a house in the suburbs. I was working very hard now, so hard I had almost no time to date or entertain friends. It didn't matter, because I knew that sooner or later I would see the blonde woman and my life would change. Sometimes, working late into the night, I caught myself wondering what she would think of the way I'd decorated the spare bedroom, or whether she'd like it if I had a pool put in the backyard.

One day I locked my keys in my car and hurried to a phone booth to call the automobile club. It was raining lightly, and suddenly I recognized the scene from the photograph. I felt vindicated. My life was on the right track.

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Ten years after I graduated I saw Cassie again. I had gone to a firm in an unfamiliar part of town, and on my way to the car I remembered that I didn't have any food in the house. I crossed the street to the supermarket, and in the parking lot, holding a bag of groceries in one hand and a child's hand in the other, was Cassie. It took me a few minutes to recognize her. By that time she had already turned to me. She knew who I was immediately. "Robert?" she said, grinning widely. She looked as though she'd barely aged.

"Cassie!" I said. "How're you doing?"

"Fine, just fine," she said. "How are you?"

"I'm fine. How's Aurora? When did you get married?" I nodded at the kid, now pulling hard on Cassie's arm and humming to himself.

"I'm not married," she said. Of course. Same old Cassie.

The kid said something I couldn't catch, and I squatted down to hear him better. "My mommy's a singing parent," he said, talking around the largest piece of candy I had ever seen.

"A singing parent?" I said.

"Single parent," Cassie said, and I stood up, feeling foolish. "So I guess you graduated, huh?"

People in school or at the aircraft company sometimes talked about inspiration, about suddenly solving a problem that had bothered them for weeks, seeing the problems that their solution brought up and going on to solve them too, on and on, effortlessly. I had always envied them profoundly. That sort of thing had never happened to me. But now, as I stood up, I realized that Cassie's son was the boy in the photograph; that he looked familiar because he looked like Cassie, though without her red hair; that since I was the oldest in the photograph with the child all the other scenes must have happened to me already. All this took a fraction of a second, and I was able to say, "Yeah, I did," before the realization hit me and I said, "You cheated me!"

The boy, so familiar now, looked up, alarmed. "What do you mean?" Cassie said.

"Those photographs," I said. "Those goddamn photographs you gave me, you little bitch. You wanted to get my hopes up, you wanted me to think that some day I'd meet a woman I'd fall in love with, and all this time it was a lie. All the scenes have happened, including the one with your stupid son just now, all except the one with that woman. And I'm too old for that one now. You put it in there just to—to—"

"I remember now," Cassie said, looking thoughtful. The boy started to pull her hand again. "I gave you those photographs, that's right. I was mad at you, because you never called me. I got them from my grandmother. But all the scenes were true, she told me. All of them. If they said you were going to meet a woman then you'll meet her. I didn't really

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look at the pictures all that closely. Wait. You're right—there was one with a woman in it. I asked my grandmother who she was and she said she worked in a department store. Was my son in one? I don't remember that."

In a department store, I thought, feeling bereft. Now I remembered a woman I'd taken home about five years ago. Halfway through the evening I'd realized she looked a little like the woman in the photograph, but she had turned to face me and the illusion was broken. Her name was Irma and she had worked in a department store, I thought, amazed that I could remember so much. She'd left in the middle of the night because she'd been worried about her dog. I never called her back.

"You mean I've been waiting—" I said. "Waiting ten years for a woman, and all this time—"

Cassie shrugged. "I don't know," she said. "Look, I'm sorry if—"

"Sorry," I said numbly. "Somehow that doesn't seem to cover wasting ten years of my life. I guess you got your revenge after all."

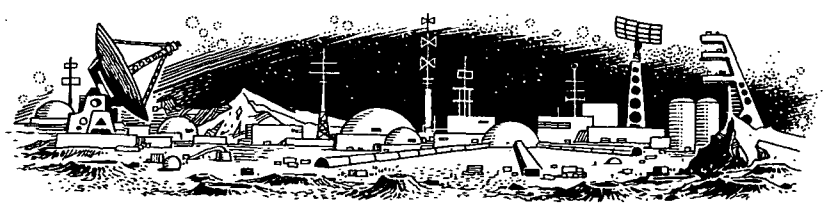
"I wasn't out for revenge," she said. "I wanted to show you something. To show you that life isn't as much fun when you know what's going to happen. To make you loosen up a bit."

"Yeah, well, you did just the opposite," I said, turning away.

"Robert?" she said, tentatively. I didn't look back.

When I got home I took the photographs out and spread them across my desk. I was surprised to see how worn they were, how frayed at the edges. How many hours had I spent looking at them, planning a future that never existed? I lit a match and held it up to one photograph, then threw them in the fireplace. Five seconds later they had all burned.

Now, in the evenings, mostly I sit and think. I feel lost, as though I've survived a great tragedy. I neglect my work, and my answering service has one or two messages every day from irate clients. I think about my wasted ten years, about Cassie and her crazy family, and their strange ability to charm. I think that sooner or later it will be time to call Cassie back, to start a life that was stopped—that I stopped—ten years ago. I'm pretty sure Cassie will turn me down. But for the first time in a long time, *I don't know for sure.* And that excites me. ●



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THE ORIGINAL
11 Observations of Methuselah

My father—half prosthetics, half leather—
rattles down the halls like a derelict
shuttle used for prospecting in the Belt.

He avoids observation blisters, the big skin
rooms transparent to starlight, and
even vidscreens focused on the heavens.

Oh, he'll rap physics or mechanics all right,
but keep it in the abstract. He nettles
when talk turns to walking skinside.

Simple and plain, he hates this colony.
It reminds him, he says, of an in-law
who once sold him a bum leg.

Actually he imagines it's a lobster trap
he squeezed into, and though he sees the exit,
he can't scuttle out with the tides.

In his vision, the sea outside turns humanoid.
It shoulders a hellacious black bag from which it
sprinkles nightmares like sugary nebulae.

I've seen the poison eat at him like lye,
fatiguing his senses. Alienating his children
who—now grown—still adore the stars.

It's as if he thought he was switching subways
and got stranded underground. Breakdown on the
Red Line. Sorry, no more colonies farther out.

Sometimes I hear him pass, son-of-a-bitching
everything like a tired brakeman, muttering
ships' timetables in his walking sleep.

But he's just shuffling away to twilight,
smacking at the kids who pinch his ass
and follow him along his möbius strip.

My sister, who is more understanding,
calls him Methuselah with the rest,
but even she knows better.

—Robert Frazier

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NUTRIMANCER

art: J.K. Potter

by Marc Laidlaw

**First we had Cyberpunk—
Then we saw "Max Headroom"—
And now, with the ultimate picture of
a high-tech future, comes Marc Laidlaw with
"Nutrimancer"!**

Imagine a TV dinner, baked to a crisp. Silver foil peeled back by the laser heat of a toaster oven. Charred clots of chicken stew, succotash,

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nameless dessert, further blurred by a microforest of recombinant mold like a diseased painter's nightmare of verdigris.

Fungoid cityscape.

Metaphor stretched to the breaking point.

Lunch.

ONE: NEON SUSHI

Someone had found a new use for an old fryboy. At the Lazy-Ate Gar & Krill, 6Pack was swabbing shrimp-racks with an 80-baud prosthetic dishrag when a Mongol stammer cut through the sleazy pinions of his hangover, sharp as a bitter mnemonic twist of Viennese coffee rinds tossed from a cathedral window into a turgid canal where rainbow trout drowned in petroleum jelly.

"6Pack?" said the Mongol. "Want a new job?"

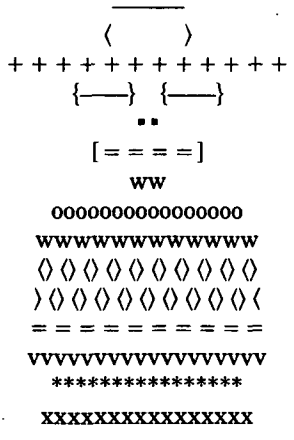
He glanced up from the remnants of crustaceans curled like roseate spiral galaxies and saw:

—Limpid pools of Asian eyeliner aswirl in a violaceous haze of pain and pastry crumbs.

—Bank check skin with "Cash" spelled out on the lines of a furrowed brow.

—Some pretty bodacious special effects.

To his typographic implants it looked like this:



6Pack scrabbled for a purchase on reality but found only the dishrag. "Man, that sweater hurts my eyes!"

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The Mongol stepped between 6Pack and the sushi counter. "It's pixel-implanted Angola wool, under hermeneutic control. Come with me or I will induce a convincing epileptic seizure by altering stripe frequency and then take you away in the guise of your doctor."

6Pack considered his options. A nearby heap of batter-fried squid tentacles quivered like golden-brown weaponry hauled from the ancient trenches of the sea. The Mongol tipped back the brass spittoon that served him as a hat, exposing an Oster ionized water-bazooka stitched among his sukiyaki corn-rows.

"What do you want with me?"

"Surely you can guess, fryboy."

"No one calls me that without hearing my story. You've gotta hear what happened, what th-they d-d-did to me!"

"Now, now," said the Mongol. "Don't cry. I'm listening."

It had all happened too fast for words.
Whiz!
Bang!
Whirr-ee-rr-ee-rr-ee!
Snip!
Clunkata-clunkata-clunkata . . .
Prrrrang!

"And when it was over, I woke up. The East Anglians had rewired my tastebuds." He waved at the racks full of squirming periwinkles, octopus eyes, mackerel intestines. "Now all this tastes horrible to me. I eat the finest chocolates from Brussels—" he cannot avoid the memory of the heavy matron who served him sourly from behind the polished glass counters, shoving a gift-wrapped box of butter-creams into his hands "—and it tastes like dirt."

"If you eat dirt, does it taste like butter-creams?" asked the Mongol. "But no matter. I know your story. What if I told you that my employers can restore your tongue to its previous sensitivity?"

6Pack sneered at him. "No one's got the technology to unsplice my tongue, short of the EASA, who did the damage in the first place."

The Mongol produced a 3D business card from some fold of his sweater and handed it to 6Pack: "I am a deaf-mute," it read.

"Wrong card," the Mongol said, snatching it back and handing him another which spelled out in tiny blinking lights: EAST ANGLIAN SMORGASBORD AUTHORITY.

"What's the matter, fryboy? Swallow something you don't like?"

Hands trembling, seeing the future unfolding before him like an origami *hors d'oeuvre,* 6Pack knelt to kiss the Mongol's fingers. "I'll do

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anything to have my palate restored," he pleaded. "Tell them I'm sorry. Tell them I'll never confuse mayonnaise with Miracle Whip again."

"You're hired," said the Mongol and drew his hands away.

The knuckles left a taste of Kentucky bluegrass on 6Pack's lips.

TWO: WIRED TO SHOP

He was at the Grocery Boutique when his shopping cart's guidance system failed. Narrowly averting disaster, he switched to manual and swerved past an oncoming cart. Heart pounding, he looked up apologetically at the other driver. That was when he saw her.

A peach recomb-polyester scarf enshrouded permed and frosted curls. From platform heels of rich Corinthian vinyl, tiny blood-colored toenails oozed forth like delicate ornaments from a cake decorator. Rhinestone-rimmed videospex hid her eyes; her face was as sterile and empty as the corridors of General Hospital that held her attention.

"Pardon me," 6Pack murmured.

"Chet, you moron, she just went in the MRI room with Emilio!"

He couldn't help gazing into her cart as he passed.

Sara Lee Weightless Cake.

Betty Crocker Astro-Cookies.

He remembered sitting in a Parisian cafe, the tip of his croissant immersed in a demitasse as a pathetic screech made him look up abruptly into a—

Bird's Eye Frozen Creamed Corn.

Instinctively, he shied from the selection, but somehow she sensed him and drifted nearer, like a platinum-blonde manta ray in the aquarium aisle. Her lips parted, gushing warm air that smelled like a stagnant wind coursing from all the demolished bakeries that had ever harbored starving mice. She smiled with green lips. A particle of biftek swayed like an electric eel, trapped between her teeth.

"I'm Polly Pantry," she said. "Join me for lunch?"

She caught his arm, pressed her mouth to his ear, and tickled the tiny waxen hairs with her tongue as she whispered, "Courtesy of EASA, 6Pack. You can't refuse."

THREE: ZERO GEE WHIZ

Menu.

Foodstuffs.

Out of the ovens of Earth they come tumbling, but in the radar ranges

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of the orbital kitchens there is no force that can cause a soufflé to fall. Jaunts into shallow space for a nulldinner are common as dirt among the filthy rich. Even in his prime, 6Pack had not dined in space. Tonight he would remedy that.

The Pixie Fatline, EASA's Artificial Conscience Module, sang in 6Pack's ear-receiver as the shuttle pulled into the neat chrome pancreas called Waiter's Heaven: "Shoofly pie and apple pan dowdy make your eyes light up and your tongue say howdy!"

"I don't understand why the EASA's being so nice to me," 6Pack paravocalized. "First they give me back my sense of taste and now they're treating me to dinner."

"Sh," said the Fatline. "Incoming message from Polly."

"Hi, 6Pack! Howrya doin'? You eat that sandwich I sent up with you?"

"Sure did, Polly," he lied. "Tasty."

Deviled ham on Wonder Bread. He hoped that the shuttle stewardess wouldn't guess who'd clogged the flight toilet.

"Okay, hon, when you get off that ship you're to go straight to Chez Cosmique. The reservations are in your name, for a party of six. Tell them that you're waiting for friends, then go ahead and order. Make them bring it right away."

"When you are in trouble and you don't know right from wrong, give a little—"

"Shut up, Fatline, I'm talking! Now, 6Pack, I want you—"

6Pack fiddled with the dial in his nostril and tuned out both of them. A six-course meal for six, he thought. Good thing he hadn't eaten that sandwich.

"There's salt in this cream puff," he complained, after the last course had come and gone and dessert floated before him. The EASA had equipped him with a false gullet that compressed his meals and packed them into tiny blocks of bullion to be deposited one by one in his Swiss bank account. He had complained about everything Chez Cosmique served, while the staff milled about wishing that his supposed companions would come claim some of the food. 6Pack had eaten it all, and now—

"I refuse to pay."

The cafe grew hushed. Aristocrats with tame prairie dogs and live coelenterates embedded in their coiffures turned upon him the incredibly credible eyes of luxury. The nearest, word a thin old man wearing nothing but tightly laced black undergarments and a bonnet of jellyfish leaned close enough to whisper, "Are you a fryboy?"

"What's it to you?"

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"I am in need of a fryboy with exquisite discrimination and a hearty appetite."

The manager slunk up to 6Pack's nulltable, where the ruins of his feast lingered, untouched by waiters who had rightly guessed that there would be no gratuity forthcoming. Five cream puffs floated in the diningspace, bouncing between invisible restraining fields with tiny detonations of powdered sugar at every impact.

"Sir, have you a question about your bill?"

"Yeah, you should be paying me to dispose of this garbage you call food."

"But—but this is impossible. Perhaps there is something wrong with your tongue. Each item is carefully prepared and tasted by our chef."

"He's a fake. Bring him in so that I can insult him to his face. Then you might make up for your incredible error by giving his job to me."

"Now don't be so hard on the poor guy," said the Pixie Fatline.

"My dear fellow," said the lean tycoon at the next table. "I have a position for a private chef. Besides, I own this establishment. You'd be wasted here."

"That's our man," said the Fatline. "Tempura-Hashbraun himself."

6Pack removed his seat belt and drifted toward the aristocrat. "What's it pay?"

FOUR: THE STAYLITE RUNS

"May I introduce my daughter?" said Tempura-Hashbraun, guiding 6Pack through an entryway. "Lady 3Bean, this is our new fryboy."

She was both cat and canary, a hybrid of starving piranha and fat guppy, all sharp fangs and soft feathers. But there wasn't time to ogle her or quiver in dread. The old man led him through the split-level satellite to the infokitchen.

He had never seen anything like it. Never dreamed that such a thing could be.

Imagine an oven designed by the old Dutch masters. Its rails and racks had been forged by the brow-heat of the oppressed masses, then plunged sizzling into the vast oceans of their driven sweat, while the Tempura-Hashbrauns climbed their limp ladder of slaves to the stars. The dials blinded him with their intensity until the old man found the rheostat and turned them down.

"6Pack, meet Nutrimancer. Nutrimancer, 6Pack. I hope you do better than my last fryboy."

"What happened to him?"

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Tempura-Hashbraun smiled for the first time, showing that he had replaced his teeth with credit registers.

"Nutrimancer fired him," he said. "Thirty seconds under the broiler and he was done to perfection." He licked his lips.

6Pack slipped his tongue into the jack, checked the pilot light, and hit the ON switch. For an instant he smelled scallions sizzling in butter, the iron tang of an omlette pan, and then he was inside.

"Wheeee!" cried the Fatline. "You're back."

Ahead of him, a ziggurat rose halfway to infinity, looking like a corporate bar chart. But it was not a savings and loan, nor an humongous tax shelter. It was a wedding cake.

He rushed forward, surpassing the rate of inflation. Tier upon tier leapt into clarity, as an army of menacing custard éclairs streaked past below.

"Watch out!" the Fatline cried. "It's covered in ICING!*"

In the instant before collision, he found his bearings and soared upward. The tiers dropped below, but not before he had read the message written in ICING upon the topmost layer: "YOU'RE DEAD, FRYBOY!"

Now he settled into the evasion routines with which the EASA had equipped him. As soon as a cocktail olive drew close enough, he snagged it by the pimento and followed it back to the foodbanks.

Kaleidoscope of the tongue:

Mint and parsley, vanilla haggis, pecans, and hundred-year eggs.

As the tastes passed through his mind, he peered into the twisted guts of the infokitchen, sorting through spice racks and rifling iceboxes. He ignored the cross-referenced accounting files that tracked the expense of every meal and ordered supplies when they were low. He ignored the brain of the vast system.

"Go!" sang the Fatline.

Straight for the stomach.

"What are you doing in my kitchen?"

His inquisitor was a rotund chef wearing a white suit and a tall white cap; he held a wooden spoon menacingly cocked. They stood on a wild mountain peak; tennis balls whipped past and the sky was full of steel engravings.

"You're Nutrimancer," 6Pack said.

"So what if I am? This kitchen is too small for two. I don't need a fryboy. I'm self-motivated. What are you?"

Memories of Earth: hot Florida sand burning his kneecaps, his first

*ICING: Incredibly Complicated Information Never Given.

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smorgasbord, popsicles in Cannes, Judy Dixon sucking his tongue till it hurt like hell.

"You have a messy mind," Nutrimancer announced. "You can't cook with all that confusion inside you. Let me clean it out for you."

6Pack cried out for the Fatline, but he'd been cut off. He gave a little whistle but it didn't help. Nutrimancer's laughter sounded like tricycle tires rushing over a sidewalk covered with worms and roaches.

"EASA can't help you now," said the chef. "I know they sent you to stop me, but I control the diet of the most powerful man on or off Earth. Soon I will have replaced every cell in his body with nutrients tailored for world domination. And old Tempura-Hashbraun has developed quite an appetite for human flesh. I'm sure he won't mind if another fryboy ends up under glass with an apple in his mouth."

Something was rising over the mountains, unseen by the deranged chef, like a pale and enormous yellow moon lofting up through the clouds. Without letting himself follow the arc of its rise, 6Pack calculated the path of its descent. He took a few steps back, drawing the chef into the point of impact.

"It's no use trying to escape. No one knows where you are. And soon the old man will have disposed of the remains."

The shadow of the falling sphere began to grow around Nutrimancer's feet. At the last instant, the chef glanced up and cried, "Aiee! Winter-melon!"

As the titan fruit smashed upon the peak, flattening the chef, 6Pack leapt from the crag. The sky went black and so did he.

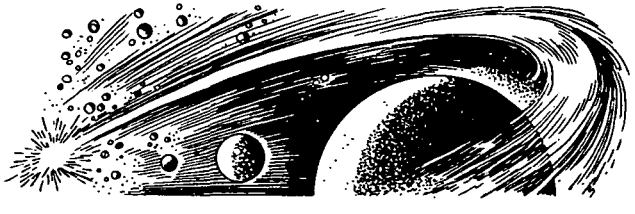
He awoke in a soft bed, an extravagant suite, as Lady 3Bean walked through the door with a breakfast tray in her hands.

"You were wonderful," she said. "Would you like something to eat?"

6Pack shook his head and regarded the rashers and canteloupe with distaste.

"Never again," he said. ●

(With thanks and apologies to William Gibson)



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AT THE CROSS-TIME JAUNTER'S BALL

art: J.K. Potter

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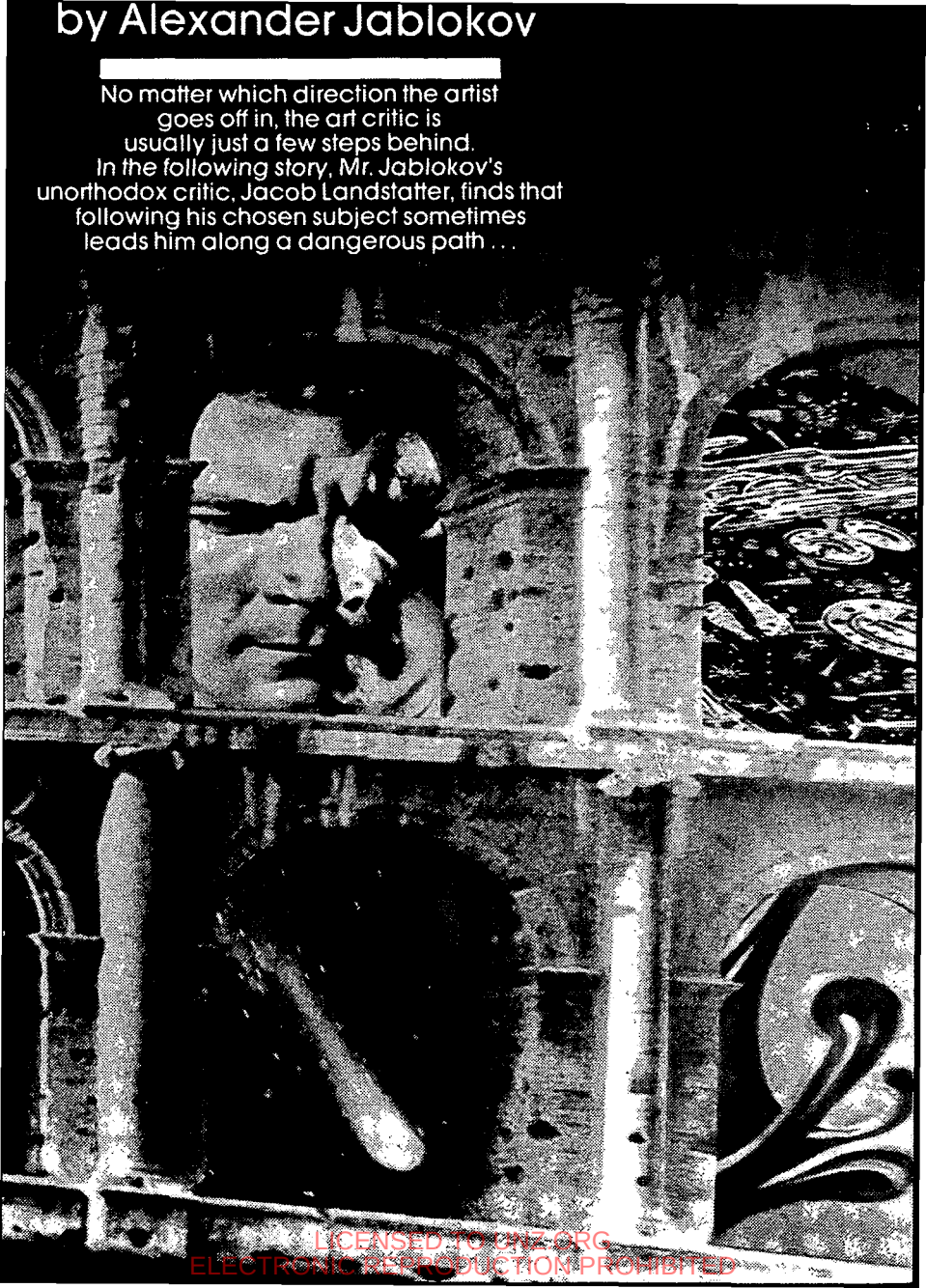
by Alexander Jablokov

No matter which direction the artist goes off in, the art critic is usually just a few steps behind. In the following story, Mr. Jablokov's unorthodox critic, Jacob Landstatter, finds that following his chosen subject sometimes leads him along a dangerous path . . .



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I had gotten lost again, as I so often did, because it was dark there, in those musty and unswept hallways that run between the universes. I've always been impressed by the amount of crap that seems to float in through the doorways and settle there, in some sort of plea for reality. An infinite network of passages linking the worlds of Shadow with that of the real might seem like a good idea, but who was going to keep it clean? The Lords were too haughty to concern themselves with things like that, and we humans were too . . . finite.

I looked in through doorways as I walked, to see such things as a city of hanging tree dwellings or an endless stairway that curved up from mist into blinding sunlight. These were delicate worlds, miniatures. As a professional critic of such Shadows I had to say that these worlds were not the style I usually liked, though one, where a regatta of multicolored dirigibles sailed above a city whose towers stood half in the sea, was excellent.

A rough wind blew past, carrying with it the clamor of a cheering army, and the pounding of swords on shields. The passage tilted upward, and I climbed a set of rough stairs, smelling first lilacs, then, when I took a deeper breath, an open sewer. I choked, and was surrounded by buzzing flies, who had wandered irrevocably from their world and, looking for shit, had found only the meager substitute of a critic. I ran up the stairs, waving the flies away, past the sound of temple bells, the dense choking of dust from a quarry, and a spray of briny water, accompanied by the shrieking of sea gulls.

Gathered in a knot in the hallway ahead of me were a group of Lords, with their servant, a huge man wearing a leather helmet. Lork Prokhor, Lord Sere, and Lord Ammene, three balding men with prison pallor and rings below their dark eyes, waited for me to give them advice on acquisition. They sat on little folding stools, and looked uncomfortable.

"You are late, Mr. Landstatter," Lord Ammene said, in a reedy voice.

"Your servant, sir," I said, ignoring the challenge. I eyed the three of them suspiciously. Lords were entirely unpredictable, and their motivations obscure. On my last trip I'd almost been trapped when Cuzco, capital of the Incan Empire, fell to invading Apache Sacred Warriors who had hired Maori warships for transport from their temple cities along the Pacific coast of Mexico. I'd spent three desperate days freezing in the Andes, my nights lit by the light from the burning city reflected in the ice fields, before I could return home. I had wondered if it was an accident, because someone had locked me in my room just when the attack began. The three of them returned my bow without standing.

The servant raised the lamp he held in his hand and examined me. I wore a three-cornered, plumed hat, a heavy, powder blue tailcoat covered with useless gold buttons, a stiff, embroidered vest with hunting scenes

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on it, extremely tight cream-colored silk trousers, and black leather boots trimmed with sable. Beneath the hat, my hair was pomaded, powdered, and pulled back into a ponytail by an ornate silver clasp. The servant sneered at me.

The Lords were dressed in their usual sober dark clothes, gold chains around their necks indicating rank. Unlike most people, they did not adopt clothing from Shadow, implying, I guess, that what they always wore was "real." Style is never real, but I am a critic of worlds, not dress, so I said nothing.

Then the servant turned the lamp around. I straightened my hat. We stood in front of a stretch of blank wall. Humming gently to himself, he adjusted the lamp until it focused on the wall. The wall shimmered, and a door opened onto a brightly lit street. I could hear the ringing of steel wagon wheels on cobblestones and the puffing of a steam launch on the river that flowed just out of sight of the doorway. "There you are, Mr. Landstatter. See you in forty-eight hours." I stopped just in front of the shimmering, the way I always do, no matter who is watching. Vanishing into unreality makes me nervous. He pushed me through, not roughly, but the way you would direct a timid actor onto a stage in front of an audience. I turned to protest, but he and his masters were gone, and I found myself addressing my retort to a broken and stained brick wall.

The water swirled against the brick side of the canal, as if irritated at having its freedom curtailed, but finally acquiesced and flowed under the arch of the bridge. On the river beyond, a vendor guiding his empty flatboat home from the market negotiated the uneven current with tired familiarity. Past the inflow of the canal he put his shoulders into his poling, undoubtedly thinking of a bowl of stew, a mug of beer, and a pipe of tobacco.

I was starting to think of things like that too. I watched the boatman vanish into the iridescent meeting of sunset and oily water, then turned and began to walk in the direction of the dam, which was where the north and south branches of the Schekaagau River joined and flowed into Lake Vlekke. It was also where the best hotels were. I strayed into the path of a pedicab, and was startled by a jangle of bells that sounded like an angry gamelan. The white-suited driver bared polished, scrimshawed teeth, cursed at me in Malay, and was gone, leaving only a cloud of ginger and curry to mark his passing.

The tall, step-gabled warehouses that had been flanking me on the left vanished, to be replaced by the unadorned brick facades of merchants' houses, which gave only hints of wealth through panes of leaded glass: the glitter of a chandelier, the flash of a tapestry, the gleam of a silver serving bowl. From a half-open window came the sound of a drinking

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song, bellowed by male voices to the accompaniment of pounding pewter mugs. Merchants, home from the Bourse and ready to do their best to keep the price of malted barley high.

A marble bridge carried me high over the river to the dam, a platform of pilings sunk into the soft earth. Ahead of me rose the towers of city hall. A small boy sat on the quay, trailing a fishing line in the water. The result of his day's labors amounted to two carp, strung through the gills, and a frog, which was jumping up and down in a jar.

"Say, lad," I said, in the Lithuanian influenced patois of the Mississippi River trade. I thought it was a nice touch. "What is the best hotel in town?" I've had fellow critics tell me that, when they work in Shadow, they stay in the sleaziest fleabags they can find, because that makes the experience more "real." I don't find lice more real, in any ultimate sense, than satin sheets.

"The best?" The boy jumped up eagerly. "The Emperor Kristiaan, on the Streetergracht! They have marble tubs and gold faucets. And Duc Noh the King of Nam Viet got shot in the lobby! They put a chair over it to hide it, but you can still see the bloodstains if you look."

"Sounds ideal. And do you know how to get there?"

"Do I! I once got thrown out for climbing the flagpole. You can see the whole city from the top! It's the tallest flagpole in Schekaagau." He hung the fish on a string around his waist and picked up the jar containing the frog, which began to jump more frantically. "Follow me." We crossed the tiled dam square, passing the triumphal arch, an explosion of soldiery, waving banners, crosses, and captive Indians pleading for mercy. Somewhere beyond city hall, bells were ringing Angelus. We walked down a narrow street, where merchants were locking up their stalls for the night. The blue lamps that taverns and places of public relief were required to show already glowed at spots along the street, lighthouses for the weary. A few minutes later, we emerged into a square which opened out onto the dark water of the canal called the Streetergracht. The other three sides of the square formed the ornate classical pile of the hotel. On top, hanging over us like a burnished artificial moon in the laboratory of a medieval alchemist, a gilded dome caught the last rays of sunlight. Three flagpoles stood in front, the flags those of the hotel, the city of Schekaagau, and the Stadholderate, in the process of being lowered by a squad of hotel employees in scarlet tunics and knee pants. The boy proudly pointed out the taller, center pole as the cause of his expulsion. I was properly impressed.

I reached into my money purse, pulled out a crescent of silver, and flipped it to him. He stared at it in wonder, then stuffed it away in one of the secret pockets boys have. "I better go. Mum will be worried. I'm late for dinner."

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I winked at him, which he liked. "Don't let me catch you climbing the towers of city hall."

"You won't," he said, ambiguously, and was gone into the gathering darkness, his captive frog still tucked under one arm. I had never learned his name.

It was after I had been lost for quite some time that I noticed I was being followed. For a moment, in my drunken state, that was funny. The poor fool thought he was going to end up in a nice hotel lobby with plush chairs and a bar where he could get a late night glass of arrack, but instead he was doomed to wander with me through back alleys and dark, warehouse-lined streets for the rest of the night, his path constantly disrupted by dark flowing canals. That was not why he was following me, of course, and I quickly ceased to find his company amusing. I glanced over my shoulder as I turned a corner. He was dressed in some sort of robes, not normal clothes at all, and didn't seem to know the streets any better than I did. I emerged on the quay by the river, its edge marked by a line of heavy granite posts holding a chain. The river flowed quickly here, constrained by the quays, and I could hear its churning and grumbling.

Out in the darkness a procession of torchlit barges, loaded to the gunwales with masquers, drifted on the reflected waters of the river. They laughed and screamed, and seemed to be having a terrific time, just as they had when I was with them, though I had not enjoyed them at all. I had drunk too much, and almost gotten sick. I had taken a walk to clear my head and work out my thoughts on my critical analysis. I doubted anyone had noticed my absence.

Despite the threat at my back, my main emotion was still annoyance. The judgment of a good critic never relaxes. Peter Lucas had made a specialty of this sort of genre piece, and I was getting tired of it. It irritated me to think that I had another day to spend here before the Key the Lords had implanted in the limbic system of my brain would take me home to the real world. To think of all of Lucas's labor in twisting human history, to create yet another set of drunken shipping magnates and aldermen in fancy masquerade pounding mugs on wooden trestle tables and pissing heartily over the sides of their barges. It made me sick. Lucas demonstrated that there were an infinite number of redundant possibilities, like a gallery hallway lined only with paintings of courting couples, or children playing with a little, furry dog.

I didn't know what Lucas had done to history in order to create this Shadow, what kings and queens he had given fevers, what storms he had raised, what matings he had arranged, what battles he had altered, in order for William Vlekke of Antwerp to discover this place so that Sche-

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kaagau stood on the shores of Lake Vlekke, rather than Chicago on Lake Michigan, and didn't get much more of a chance to think about it, because my pursuer decided that that was a good moment to jump me.

His attack was theatrical, with a scream and leap. His body was slim and strong underneath the heavy wool robes, but he was more enthusiastic than skilled, and I threw him off. He hit the ground heavily, then rolled and came up with a glittering, curved knife in his hand. I backed away. He didn't seem to be trying to rob me. He had other things in mind. My ridiculous clothes suddenly seemed as constricting as a strait jacket. He came forward with his blade dancing before him. It was a beautiful piece of work, I noticed, with an elegantly patterned silver hilt. It would look wonderful sticking out of my chest in the morning light.

Critics of Shadow are used to such things, however, and I was not as defenseless as I looked. As he came at me, I pulled a packet of powder out of a pocket and threw it at him, squeezing my eyes shut at the same time. Even through my closed lids, the flash of the powder left an afterimage. He shrieked and stumbled back, completely blinded. I slipped brass knuckles over my fingers, moved in, and punched him at the angle of his jaw. This was unfair, but I wasn't feeling sporting that night. His head snapped back and he yelped. He slashed back and forth with his blade, still not able to see anything, but dangerous nevertheless. I dodged in and hit him again, and he stumbled back and fell. His head crunched sickeningly against one of the granite posts, and he rolled over the side of the quay into the water. For a long moment I stood swaying drunkenly, trying to figure out where he had gone. Then I ran up and looked over the edge. Water roared heavily below in the darkness, but there was nothing else to be seen. I slipped the brass knuckles off my hand, and started to try to find my way home again. It was a long while before I found the square in front of the hotel, and I was still shaking when I did.

A marble bathtub is a beautiful thing, but it takes forever for hot water to heat it up. I finally slid into the bath and was able to relax my muscles. The attack had left me with a number of bruises, but no answers. Answers were sometimes scarce in the many worlds of Shadow, which the Lords had caused to be created for their mysterious pleasures. But the municipal river patrol would be pulling a body out of the weir at the dam in the morning, and I had no idea why he had tried to kill me, and I like to have reasons for things like that. Cuzco, Schekaagau . . . Had the Lords tired of my aesthetic sniping? Was I simply paranoid? That was an occupational hazard. I knew I would get no answers that night, so I got out of the bath, toweled myself dry, and went to bed.

I turned the key on the gaslight, dimming it to a blue glow. The boy had been real, though. Give Lucas that much. Everyone else seemed like a moving waxwork, but that boy was as real as anyone. I was not sure

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the Lords enjoyed "reality" in that sense, since they themselves did not seem particularly real to me.

Reveling in the feel of satin against skin, I turned over in bed, to find myself staring at the patterned silver hilt of a knife, still vibrating from its impact, that had somehow come to be imbedded in the bedpost next to my head. The motif was one of eyes and lighting bolts. The last knife I had seen like that was now at the bottom of the Schekaagau River. I wrenched the knife from the bedpost and ran to the window, but my second attacker had already slid down the drainpipe and vanished, leaving me with a souvenir of my night at the Emperor Kristiaan.

"Mutated *E. coli*," Salvator Martine said. He had pulled me away from the other guests at his party to give me this information.

I swirled the Tokay in my glass and watched it sheet down the sides. *"E. coli?"* Only Martine would serve a wine as sweet as Tokay before dinner.

Martine grinned, bright teeth in a face of tanned leather. He was annoyingly handsome, and smelled sharply of myrrh and patchouli. The Lords loved him, for no good reason that I could see. Several had even come to attend his party. "Normal intestinal flora. Mutated and hybridized with amyotrophic lateral sclerosis. Infects via the GI tract and destroys the central nervous systems of higher primates. Neat. Grew it in the guts of an Australopithecine on the African veldt, two, three million years ago. Not easy, Jacob, not easy. When I woke up on that pallet at Centrum, I had bedsores, and a headache that lasted a month. Killed them all. Every last one of the buggers. Nothing left on this planet with more brains than an orangutan." He downed his glass of Tokay as if it were water. I took another slow sip of my own.

We stood on the parapet of what he called his "palace." Behind us I could hear the sound of the party, voices and clinking glasses, background music, occasionally a laugh. The sun set behind rolling green hills. From a distant ridge came the cry of a deer. A trail of mist descended on the valley, glowing in the evening light. Except for the ones behind us in the party, there were no other humans on the planet.

"Infectious lateral sclerosis . . ." I murmured to myself. This was art?

Martine laughed. "Not to worry. With no hosts, it died out, and there are no other vectors. I was careful about that."

He'd misunderstood my moodiness, of course, but it took a particularly impervious cast of mind to be a molder of worlds. Martine had succeeded in wiping out all of humanity, collateral branches to boot. By some standards, that made him a god. A god with bedsores. That left me with a blank canvas to look at, but nothing to review, which was perhaps his intention. If a tree falls in a forest and no one hears it, that's one thing,

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but when the acorn is worm devoured and the tree never exists, what sound does it make then?

"You are looking at Berenson's new world next?"

"Yes. She's been very mysterious about it, but I suspect—"

A voice interrupted us.

"There you are. The most notable men at the party, and the two of you stand out here watching the sunset. Where's your sense of social responsibility?" We both turned. Amanda, my wife, closed the door behind her, passing through in the roar of voices. She wore a dress that fell in waves of green and blue silk, and she emerged from it like Aphrodite from the foam, her blond hair braided and coiled around her head. A moonstone glowed in its silver setting as it rested on her forehead.

"We were waiting for you," Martine said with that charming insincerity that Amanda seemed to like.

She came up and took a sip of my drink. She smiled at Martine. "I'll have you know, Salvator, that Jacob detests sweet drinks before dinner." She took another, and kept the glass. "I've been wandering around your palace. It's wonderful! How did you ever create anything like it?"

I felt a surge of annoyance. The palace was a monstrosity. It had towers, with pennants snapping in the breeze. It had triumphal staircases. It had flying buttresses. It had colonnades. What it didn't have was structure. It looked like an immense warehouse of architectural spare parts.

"It was built by some people from a world I did a few years back. Remember it, Jacob? The Berbers of the Empire of the Maghreb ruled Northern Africa. They flooded the desert and built great palaces. I had planned that." He turned to Amanda. "As I recall, Jacob didn't like it much."

He recalled correctly. I couldn't remember much about that particular work, just hot sun and blinding water, but I did remember that I hadn't liked it. The Lords had bid it up, though, and it was now in someone's collection, making Martine wealthy. Critics should never socialize with artists; it's difficult enough to like their work in the first place.

Amanda came up and pushed herself against me. Her perfume smelled of violets, and I lost track of what I was thinking. I put my arm around her, and she pulled away, as she always did once she had my attention, and walked to the other side of the parapet to enjoy the sunset.

Amanda had once been close to me, but was now distant, and I couldn't remember when that had changed. It could have happened overnight, since Amanda often went to bed loving and woke up cold. Something she saw in her dreams, I'd always thought. But now it was that way most of the time, and I felt I'd let something slip by, as if we'd had an immense knock-down drag-out fight that I had not been able to attend. On the infrequent occasions when we made love it was like two people sawing

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a tree trunk, the length of the saw between us and only the rhythm of the task keeping us together. This still left me wanting to do it much more often than she did.

Voices shouted for Martine inside, so the three of us went in through the French doors. The banqueting hall was an immense room, thirty feet high, and banners from the Shadows Martine had created hung down from the beams supporting the ceiling. Someone pressed a glass of wine into my hand, not Tokay, mercifully, but some dry red. The party poured after Martine as he strode through the hall, out the double doors at the other end, and down the immense stairway. At the bottom rested a cube wrapped in black velvet, about six feet high. It had been delivered through the hallways by servants available to the Lords. Despite myself, I was impressed. They did not usually permit ordinary men to move objects from Shadow to Shadow.

"Let's carry her up," Martine said, and the party surged forward with cheers. It took a half dozen people to lift it. "Take my place, Jacob," Martine said, and I found myself with a shoulder under one corner of the cube. We angled it back and, cursing and laughing, hauled it up the stairs. It was heavy and tried to slide back. I started to sweat.

A space was cleared on the floor among the armchairs and the tables covered with half-finished drinks. The cube was put down. I looked for Amanda in the crowd but couldn't find her anywhere. I remembered what she was wearing, and her moonstone, but wasn't sure that I knew what she looked like anymore. It seemed that as she had grown more distant her face had stopped being familiar.

"This is from a world I did recently. It's not worth visiting, believe me, but it did produce one thing that's worthwhile. I asked the Lords for permission to bring it back for my collection." He pulled on a cord and the black velvet fell to the floor. The crowd grew silent and drew back, but no one took his eyes away.

The most beautiful woman in the world was in hell, but she had been turned to stone and no one could do anything about it. She stared at us from behind five inches of leaded glass with pleading in her eyes. She was a Madonna, and a newborn child lay in her lap. His eyes stared blankly upward, for He had been born hideously blind.

I had more information than Martine thought I did, from my sources at Centrum. I knew that Martine had caused eight entire worlds to be destroyed by nuclear war before he got the effect he wanted. On the last try, a group of artists, vomiting, losing their hair, seeing the constant glimmer of optic nerves degenerating in the radiation flux, had found a boulder in a blast crater and set it on a hilltop. The rock was dense with exotic isotopes, and had killed the sculptors as they chiseled it. They had worked as one, and it was impossible to tell where one artist had

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left off and the next began. They had created a masterpiece, probably not even knowing why, but Martine claimed this work as his own. Radioactive fantasies had been fashionable among the Lords lately.

I turned and walked away, rubbing my shoulder. The party was getting loud again, despite the pleading eyes of the Virgin Mary, and I felt a little sick. I walked down a long hallway lined with loot from Martine's various creations. I stopped in front of one painting, of Christ being carried drunk from the Marriage of Cana by the Apostles. It looked like a rather mucky Titian, all droopy flesh and blue mist, but Amanda had pointed it out specifically to me earlier in the day. She never really seemed to care much about art herself, but she somehow always knew precisely what I would like. Or would not.

"Mr. Landstatter. Good evening." Sitting in the shadows on straight-backed chairs, like Egyptian deities, were two Lords, Jurum and Altina, who seemed to be married, although it was hard for me to tell. At any rate, they were always together.

"Good evening." I bowed, but did not speak further.

"We've just been looking at Martine's little collection," Altina said, her voice a gentle hiss. "Symbols and parts, it seems to us. Reflections of worlds in objects, and so an imitation of our strings of Shadow. What say you?" They awaited my judgment.

Lords are strange beings. They collect worlds the way children collect brightly colored stones and seashells, but require others both to create those worlds and to determine whether they are worth having. They had gained control of the infinite universe of Shadows before anyone could remember, raised Centrum, and seemed intent on continuing in this position forever. Had one of them decided to kill me? The fact that two attempts had already failed suggested that a critic of murder would have had to give their efforts a bad review.

"The objects have significance in themselves, and not just as signs to Shadow," I said. The Lords often had trouble understanding ordinary art. "This statue of Apollo, for instance . . ." They stood and listened, Altina resting slightly on Jurum's arm, as I took them through Martine's collection, which ranged from the brilliant to the mediocre, and seemed to have been forgotten here, like junk in an attic. They thanked me, finally, and walked off to bed, discussing what I had said. I realized that the party above had grown silent, and that it was time for bed.

When I returned to the banqueting hall, it was empty, save for the tormented Virgin. I stopped to look at her, but her expression had become reproachful, as if I were somehow responsible for her fate. I turned away and went to our room.

The bed was still made, and Amanda was nowhere to be seen. I took my clothes off, threw them on the floor, and climbed in under the covers.

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Our room was in one of those dramatic towers, and there was nothing but darkness outside the windows. I fell asleep.

Amanda woke me up as she slipped into bed, some time later. I started to say something, to ask where she had been.

"Shh," she said. "I didn't mean to wake you up." She hunched up on the other side of the bed, the way she did so often, even though the bed was not particularly large and this meant that she dangled precariously over the edge. I moved closer to her and nuzzled her neck. "Please, Jacob. It's late and I want to sleep. See you in the morning." She yawned and was quickly asleep, or at least pretended to be.

I lay back on the other side of the bed, my heart pounding. I knew that no matter what I did, I would be unable to sleep. When I had left her, she had smelled of violets. Her neck now had the bitter aroma of myrrh and patchouli.

The Capuchin did his calculations with a light pen on what looked like a pane of glass, causing equations to appear in glowing green. Interpolated quotations from the Old Testament emerged in yellow, while those from the New Testament were light blue. Unavoidable references to Muslim physicists flashed a gory, infidel red. I gazed out from under my cowl, impressed but unenlightened. I don't know anything about nuclear physics, and even when I thought I had managed to pick up the thread of an argument, I was immediately thrown off by a gloss on Thomas Aquinas or Origen. I contented myself with smelling the incense and watching the glitter of the LEDs on the rosaries of the other monks as they checked the Capuchin's calculations.

He turned from the glass and faced his audience. He raised his arms in supplication to heaven, then clapped his hands together. The equations disappeared, to be replaced by a mosaic of Christos Pancrator, His brow clouded by stormy judgment, lightning ready to be unleashed from His imperial hands.

"Brothers!" the monk said. "All is in readiness. For the first time in history, the fires of Hell shall be unleashed on Earth, chained at the command of the sacred Mathematics that God, in His Wisdom, has given us to smite the infidel. We will now examine this flame, and if it is not found wanting, its hunger will soon consume the arrogant cities of all those who would oppose the Will of God!" We rose to our feet and followed him up the stairs to the surface.

It was dry and bright outside, and the sky was a featureless blue. We segregated ourselves by Order, the gray of Dominicans to the right, the brown of Franciscans to the left, and the martial, oriental splendor of the Templars and Hospitallers in the center. There were last-minute

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checks of the dosimeters, and several of the more cautious had already flipped their goggles down and were sucking on their respirators.

In front of us, across the cracked, dried mud, amid the rubble of what had once been the city of Venice, stood the Campanile of St. Mark's, looking the same as it did in a Canaletto painting, except for the fact that the gray ovoid of the atomic bomb rested on a frame on top of the steeply pitched roof. Nearby, the crumbled dome of the cathedral lay on the ground like an overturned bowl. At a distance stood the crazily leaning Rialto bridge. All around, the flats of the dry lagoon stretched away. A trumpet call rang through the air. We repaired to our trenches, all now monastic grasshoppers with our goggles and breathing tubes. We knelt, facing the tower, and the bomb.

When the blast came, it looked, in my goggles, like a bright, glowing dot that faded quickly to red, and then darkness. The blast shoved at the shielded robe, and I felt the heat on my face. The sound of the blast thundered in my earplugs. A moment went by. I pulled up my goggles.

The ruins of Venice had been replaced by a smoking crater. The mushroom cloud towered overhead like a cowled monk of a different Order.

In sudden, unplanned fervor, the monks began to pull themselves out of the safety of the trench and march towards the crater. I, of course, was with them, though I felt like a fool.

A resonant bass voice started the tune, and the rest of us joined in:

Dies irae, dies illa
Solvet saecllum in favilla
Teste David cum Sybilla . . .

The Latin held a wealth of allusion lost in the English:

Day of wrath! Day of mourning!
See fulfilled the prophets' warning
Heaven and Earth in ashes burning!

We knelt by that smoking scar and prayed until night fell.

My limbic Key brought me back to the hallways of Centrum vomiting and almost unconscious. Someone found me and hauled me out, a long way, since it was a distant Shadow. I had no idea who it had been, though somehow I doubted that it had been a Lord.

The Medical Ward was high up and had large windows that let the sunlight in, unusual in the rest of the Centrum. It was a bright day outside, and I could see the endlessly repetitive walls and blocks of black rock that made up the home of the Lords of Time, stretching out to the

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horizon. There were no gardens in the pattern, no sculptures, and few windows. Centrum stretched over a large part of the continent some still called North America. I thought the Medical Ward abutted on the Rockies, but I was not sure, though I had already been here twice. My head pulsed and I felt disoriented.

The ward was filled with the real effects of Shadow. A theoretical anthropologist, his arms and legs replaced by assemblages of ebony, cedar, and ivory by a race of mechanically inclined torturers, lay spread-eagled on his bed, asleep. Each twitch in his shoulder or hip sent dozens of precisely balanced joints flipping, so that he danced there like a wind-up toy. In the corner lay a fat man who had been participating in a stag hunt through the forests of Calvados, in some world that still had a Duke of Normandy, when a cornered aurochs had knocked over his horse and given him a compound fracture of the femur. He'd lain in some canopied bed, surrounded by porcelain and Shiraz carpets, dying of tetanus, while the colorful but medically ignorant inhabitants of that Shadow crossed themselves and prepared a grave in the local churchyard. When the timing signal in his Key finally came, he'd pulled himself out of bed and through the Gate to the hallway, just as I had. The man in the bed next to mine, who gasped hoarsely every few minutes, had gotten drunk, wandered into the wrong part of town, and been beaten by some gang. This was familiar to me too. It could have been any town, the Emperor of Zimbabwe's summer capital on Lake Nyanza, or Manhattan, minor trading city in the Barony of New York, or Schekaagau. It didn't really matter. He moaned again.

"Ah, 'The Suffering Critic.' A work to gladden the heart of any artist." Standing at the foot of my bed, with a bouquet of multicolored daisies, was a dark, bearded man with a slight twist of amusement to his mouth. That quirk was there so often that it had permanently distorted the muscles of his face, so that he always wore the same facial expression, like a mask. Masks don't reveal, they conceal, something it was easy to forget.

Amanda had caused to be sent to me an even dozen long stemmed red roses, which loomed over me where I lay. He read the card, which just said "Get Well" and nothing else, and, with the impatient gesture of a god eliminating an improperly conceived species of flatworm, he pulled them out of the vase and threw them away. He shoved his own daisies in their place. This done, he sat down in the chair next to me with a grunt of satisfaction. "Jacob, old friend. You look like hell, and your hair is falling out."

"You're too kind, Samos."

"Do you know of any reason why anyone would want to kill you?" He peered at me to see what my reaction would be.

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I stared at him for a second before I thought of a response. "Samos, I'm a critic."

"Point well taken. But you haven't answered my question."

"Samos, when you come to visit a sick friend in the hospital, you're supposed to make small talk, not start off with—"

"The fact that I suspect someone of trying to kill you?" Halicarnassus was remorseless. "Not telling you that as soon as possible would be crass impoliteness. However, if you insist. On the way here I saw some cumulus clouds. They brought a number of impressions to mind, and in fact I saw one that strongly resembled a mongoose."

I should have known better. I sighed and gave up. "To answer your question, Samos, no, I don't think someone's trying to kill me. Do you?"

He grimaced. "I'm not sure. It's just that the shielding in your robe was good, everything was in order, calculations from your dosimeter indicate that you absorbed a dose of somewhat over twenty rem, high but not fatal, and yet, you were almost dead when they got you here. Don't you find that odd?"

"How did—" I stopped. It was useless to ask Halicarnassus how he found these things out. He seemed to know all the back stairs of Centrum, including which steps creaked. "I don't, unfortunately, find getting radiation sickness after walking into a fresh blast crater particularly odd, no."

"Let me remind you of the fate of one of your predecessors, who died in a zeppelin explosion while eating *coq a vin* off a silver plate in the company of the Duc de Moscau."

I'd been trying not to think of him. "Gambino was reviewing one of Nobunaga's worlds, if I remember. His people are colorful, but tend to be indifferent engineers." I didn't know why I was arguing with him.

Halicarnassus shrugged. "He'd also revealed Lord Meern's collection of sexually obsessed societies, which caused Meern to suffocate himself, if you'll recall. It *could* all be accidental, of course. In an infinite number of Shadows, an infinite number of things happen. But here's an interesting thought. Can you conceive of two worlds that differ in only one important detail?"

It was a relief to talk shop, rather than death. I hadn't caused anyone's suicide. Not that I knew about. "What do you mean?"

"Say I create two Shadows, identical in everything, except in one the writing in books is boustrophedon, like the ancient Greeks did it, with alternate lines going right to left. It's a more efficient way of reading, really, you don't have to move your eyes back to the beginning of each line."

I liked the idea. "Or two Shadows, but in one men kiss, rather than shaking hands."

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"Taking an inhabitant of one and dropping him in the other would cause no end of problems. Or better yet, trading two otherwise identical people."

"Both would end up arrested."

We laughed and explored the idea, and the thought of murder, never quite reasonable to begin with, was forgotten.

"Jacob!" Amanda finally flounced in, wearing a red dress, not one I remembered ever having seen before. She pecked me on the forehead, then sat down in the chair and rearranged the pleats of her dress until they lay in the proper pattern. Then she smiled at me. Behind her, moving silently, was Martine, holding a box. My head was pulsing again, and I felt disoriented. I blinked my eyes, but it didn't help.

Martine and Amanda were both frowning over my shoulder, as if there was something improper there. Halicarnassus stared back expressionlessly, then bowed. Amanda smiled tightly, Martine did nothing. "Good day, Jacob," Halicarnassus said, patted my shoulder, and was gone.

They had brought me cookies, airy things of almond and spice. Amanda had made them. I hadn't known she could bake. *They* brought me cookies. Symbols are not only in books, but help us see the structure of our own lives. Each cookie shattered as I bit into it, then stuck to my teeth. Martine avoided this problem by swallowing his whole.

Martine was desperate to know what Halicarnassus and I had been discussing, but didn't want to ask. I ignored his ever more pointed hints with sickbed stupidity, and left him frustrated. It was meager satisfaction. Amanda chattered, more talkative than I'd seen her in months. I watched the delicate curve of her throat and shoulders. She talked about the weather, about jewelry, about the music she'd been listening to, about art. Her tastes were dependent on the important others in her life, but she'd been mine for so long that I had forgotten, and was startled to hear her criticizing works that I loved, and thought she had also.

I lay back and listened to them, until their voices were just a buzz. Life was full of troubles, and I had more important things to worry about than exploding zeppelins.

I hadn't been in Halicarnassus's new world for more than five minutes when I saw her. I should have known better than to be in his Shadow in the first place, but I've never been able to resist an exclusive showing, even knowing his habit of unpleasant tricks. Halicarnassus had always enjoyed forcing societies into unnatural forms, unhealthy adaptations. He'd done an ornate Victorian style Europe full of confectionary palaces and light operas which practiced brutal ritual cannibalism at fancy dress dinner parties, a hereditary American Congress full of dangerously inbred religious fanatics who dressed in drag when deciding on bloody

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crusades against Sumatra and Ethiopia, and a North American Great Plains kept free of habitation from the Mississippi to the Rockies so that its Mongol conquerors could ride as their ancestors had, while forcing enslaved Europeans to build meaningless monuments larger than the Pyramids. His worlds seemed to disturb most of the Lords, who found them mocking, and they found few buyers. He got by, somehow, the way artists always have, and still made his art.

I came into this world on the bottom level of Grand Central Station, as if I were simply another traveler amid the scurrying mobs, who carried me up into the light of the streets above.

Just a few blocks away, near St. Patrick's Cathedral, I saw Amanda, her blond hair curled and flowing, crossing 50th Street on Fifth Avenue, obviously in a hurry. I didn't stop to think, but followed her trim, gray suited figure as she walked down the street, carrying a briefcase. The people of this Shadow did not dress brightly, or use much color on their buildings, which were disproportionately high, like the spires of iron cathedrals that had never been built. So Amanda, always in fashion, dressed here in discreet urban camouflage.

Love is a random process, depending on such improbable events as an introduction by mutual friends followed by a chance meeting in an exhibit of etchings, and a common liking for a certain sweet wine punch which now, in memory, makes me gag. Or perhaps not so improbable: I later found out that Amanda had gone to that gallery because she knew I would be there. She has never learned to like copperplate etchings, though she pretended to, at the time. The loves of our ancestors were equally random. Exact duplicates of individuals seldom exist from Shadow to Shadow, despite Halicarnassus's elaborate plans for almost duplicate worlds, so we almost never get to see ourselves in a different life. Was there a Jacob Landstatter in this world? A Salvator Martine?

So I followed her, my heart pounding. Her waist and her hips were just the same, and she swayed, enchantingly, the way she always had. When she stopped at street corners, she looked up at the tops of the buildings, shading her eyes, as if looking for roosting storks, or gargoyles. Her walk was quick, even on heels, and I had to concentrate on keeping up, difficult on the crowded street. She continued for quite a distance, finally coming to the edge of a large green park called, with no particular originality, Central Park. This was a strange, mechanical Shadow, full of flying machines and automobiles. It was incredibly noisy. She finally turned into a large gray building called the Metropolitan Museum of Art. I paused at the base of the stairs for a long moment. Banners announced special exhibits of eighteenth century French crystal, Japanese swords, and the works of a Rembrandt van Rijn. Dutch again. I was tired of Dutch. I followed her up the stairs and into the museum.

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It was Rembrandt that she wanted, and she went straight there through the maze of corridors. It was an exhibit of copperplate etchings. Much of it was a series of self-portraits of that same Rembrandt van Rijn, from rather boorish youth to brooding old age, in a variety of strange headdresses. The man was obviously a genius, and I lost myself in his intricate lines.

"He is remarkable, isn't he?" she said, at my side. "I took some time off from work to come see him. This is the last day it's going to be here."

I turned slowly to look at her. Her eyes were the same too, lighter blue within dark, under long, soft lashes. She looked down when I met her gaze, then glanced back up. There was no sign of recognition in her eyes. No Jacob Landstatter in this world. Until now. She smiled. Here she smelled like wildflowers, something other than violets.

We found ourselves strolling around the exhibit together, giving each other details of the various etchings as gifts. Some of her remarks were critical, and I suspected that she didn't think as much of etchings as she had initially claimed she did.

"I don't know what I should do now," she said, looking up and down the street after we emerged. "I don't really want to go back to work . . . it's too nice a day." She looked at me, then looked away.

I suggested we get a drink, and she took my arm as we walked. I felt like an idiot. What was I doing? It was a beautiful spring day, and our steps matched as we walked. She looked up again, at the corner, and we discussed the cornices of buildings, the eaves of the roof of the house she had grown up in, the strange places birds manage to relax, and hidden roof gardens in Manhattan. It had been a long time since I'd enjoyed a conversation quite that much. She flirted with intent, and smiled when she looked at me. "I've been so lonely," she said.

Suddenly she froze, then turned to look into the window of a stationery store, pretending to look at her reflection and correct her hair. "Oh shit," she said under her breath. "Oh damn. Oh *damn*. Why is he here?"

I looked up and down the street, and had no problem spotting him, no problem at all. He walked with his head held up and his arms swinging, and wore a floppy shirt from South America. His right hand was stained with chrome yellow and viridian. Still an artist, even here, Salvator Martine strode past, his eyes fixed on an image invisible to everyone else on the street, and did not see us. I looked at Amanda. She was trembling as if with a chill. Her left hand pulled at her hair, and she looked vulnerable, like an abandoned child. It was only then that I noticed the glint of a gold wedding band on her finger, and it all made sense.

"Who was that?" I asked.

"Who? Oh . . . somebody. It doesn't matter." She talked quickly. "Let's go."

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I went with her, but everything inside of me had turned to ice. I managed to disengage myself from her after drinks but before dinner, to her obvious dismay. She liked me, and found me attractive. I felt a fool for still wanting her, like a small child who wants to play with shards of glass because they glint so prettily in the sun, but I couldn't help it. We made a date to meet at the Museum of Modern Art the following week, for an exhibition of Rothko. She would be there, but I wouldn't be. It would be another two days before my Key would allow me back through the gate into the hallways. They had something called television here, moving images in a box. I decided to stay in my hotel room for the rest of the time and watch it.

When I returned home, I knew Amanda, my Amanda, the real Amanda, had finally gone. There was no trace of her perfume in the air, and her things were gone from her bureau.

I walked through the entryway, down the hall, and into the quiet room, where I settled into a low couch facing the green, moss-filled garden. The chuckle of the stream flowing through it was vivid in the silence.

Why did I hurt? Because I, of all possible Jacob Landstatters, had finally lost my Amanda, out of all possible Amandas? Does a minute flux in the probability stream feel pain? Nonsense. The pain was real, perhaps, but I wasn't. I waited to vanish. But cardiac muscle doesn't know anything about alternate probability worlds, or Shadow, or feelings of unreality, or the Lords. My heart continued beating. My diaphragm continued to pull downward, filling my lungs with air. My stomach rumbled. I was hungry. I got up to make myself a sandwich.

The kitchen was clean and silent. Copper pots and steel utensils hung over the drainboard, and the red curtains puffed in the breeze from the open window. The breadbox contained half a loaf of rye bread, fresh and aromatic. Where the devil had it come from? Amanda couldn't have put it here, she'd obviously been gone for too long. I hefted it. The crust was crisp.

"Stop playing with your food and cut a slice for God's sake," a voice said behind me. I whirled, loaf in hand. Halicarnassus was sitting at the table in the darkened alcove. "It's impolite to threaten your guests with deadly viands," he observed. "Cut a slice, I said. I've got the mustard and roast beef here."

"How kind of you."

He took a luxurious bite of his sandwich. "Give it up, Jacob. Ah. Rye, beef, and mustard. There are some aesthetic verities that transcend reality. The field of gustatory ontology has been much neglected by philosophers."

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"So much the worse for ontology," I said, settling down to lunch with as much grace as I could muster. I really was quite hungry.

"So much the worse for philosophers! All this Truth and Beauty stuff is fine, but it obscures the real issues. Rye bread! I try never to create a world in which it cannot be found. One must have an absolute aesthetic criterion to give an anchor to one's life."

There are worse ones, I suppose. "Did you create that entire world to give me an object lesson about my personal life?"

"Hey, they have great rye bread in that city. Don't be such an egotist, Jacob. I put that in as a little detail, an ironic reference, like a dog crapping in the corner of a hunting scene. No artist is going to create an entire world just to please one critic's vanity. That's a real world, full of real people. Just like this one."

I had been suspicious for a long time, about the Lords, Centrum, and Samos Halicarnassus, so I decided to risk the question. "Did you create this world, Samos?"

He grimaced. "Yes, and not one of my better efforts, I must say. The Lords are an insufferable bunch, and Centrum is . . . excessive."

"Where are you from?"

He passed a hand over his forehead. "You know, I'm not even sure I remember. A lot of white stone buildings. Apple orchards. A big blue sky. Doesn't tell you much, does it? I guess it didn't tell me much either. But I remember school, a big hall with a dome, and my first world. It was a clunky thing, with brass and mahogany steam carriages and wars full of cavalry charges and solemn republics whose capital cities were always built of white marble and top-hatted ambassadors who exchanged calling cards and people who lived, breathed, and died, just like they did at home. I went to live there, a requirement for graduation, I think. I never went back. I just made worlds, Shadows you call them here, and moved on, sometimes into one of mine, usually into one I stumbled onto made, presumably, by someone else."

"So yours was the real world."

"Jacob, I've always been amazed at your inability to detach your emotions from your intellect. That world was created as a private project by a man from a culture so different from this one that my mind does not retain any information about it at all. He was ancient when I was a child, the grandmaster of the school. He died much honored, since he was, I suppose, God." He cut himself another slice of bread. "It would be nice to be certain one existed, but as long as we spend our time twisting time like this, rather than on more rational pursuits, none of us ever will be sure. Most of the inhabitants of the worlds I have created at least *believe* they exist, which gives them the advantage over us. Your Lords devised these absurd Keys in your limbic systems to give you all a sense

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of reality, since you always feel like you are coming home. A nice touch. You, incidentally, no longer have one."

I remembered my strange dizziness and disorientation at the medical ward. At the time, I had chalked it up to radiation sickness. "How did you manage that?"

"Friends at the hospital in Centrum, willing to do me a favor. And why shouldn't they? I created them, after all. It's really a simple modification, and performed more often than you might think, even in this most real of all possible worlds." He ate the rest of his sandwich and stood up. "Well, that's enough for now. You'll be seeing me again, I think. You're one of my more engaging creations."

"Oh shut up." I put my head in my hands. This was too much.

"Good luck on your next job."

"What do you know about my next job?"

He grinned maliciously. "It's by Martine."

I choked on my food. "That son of a bitch has taken off with my wife." I stopped. It hurt. It was surprising how much it hurt.

"Don't worry. It's no more real than anything else."

"It's no less real. My guts feel like they've been caught by a fishhook."

"And you sneer at gustatory ontology. Good day, Jacob." And he walked out the door and was gone.

The various portions of the Chancellery Gardens of Laoyin harmonized not only in space, but in time. The arrangement of dells and lily ponds, of individual Dawn Redwoods, laboriously dug, full grown, in the fastness of Old China and brought here up the Lao River, which I knew as the Columbia, in barges built for the purpose, of stone temples with green bronze cupolas, and of spreads of native prairie, seemingly engaged in a devious wildness but actually existing because of the efforts of dedicated gardeners, took on meaning only when observed at a receptive stroll. I emerged from the yellow-green of a stand of ginkgoes, descended a gorge alongside a stream, and arrived at the rocky shore of a lake, its verge guarded by cunningly twisted pines and Amur maples. I trod the gravel path further, and felt uneasy. While I strolled, too many others strode purposefully, usually in tight groups of three or four. The vistas were ignored by men who muttered and gestured to each other. Either trouble was brewing, or the inhabitants of this Shadow had decidedly odd ideas of how to enjoy a sunny afternoon in the park.

A Bodhisattva blessed my exit with bland beneficence. In contrast to the serene order of the Chancellor's garden, the city streets beyond were a tangle. What had been intended as triumphal thoroughfares were blocked every hundred paces by merchant's stalls, religious shrines, or entire shanty towns, complete with chickens and screaming children.

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Under other circumstances, it would have been a swirling, delightful mess.

However, the streets had the same feeling of oppression as the park. Everywhere there were knots of people discussing dark matters. A scuffle broke out between two groups, one with dark skin and bulbous, deformed Mayan heads, shouting loudly and striking out clumsily, the other short, sibilant, with narrow catlike eyes and flat noses, darting with precisely placed energy. Suddenly abashed by the attention they aroused, both groups melted into the surrounding crowds.

"The Prince is dead." Everywhere I heard the murmur. "The Prince, murdered. Vengeance, for our Prince. Where is his murderer? He must be found. He must be killed. The. Prince. Is. Dead." Each word was a call of anguish.

I emerged onto a wide street that had been kept clear. Flat fronted buildings of basalt bulked on either side, all identical.

There was a sound down the way, the rhythmic thud of metal drums, growing ever louder. In response to some signal not perceptible to me, a crowd had gathered. Some of them were dressed in woolen robes that looked suspiciously familiar to me, but there was no time to think about it. Everyone began to sway in time to the beat. As the sound of the drums approached I could hear, over it, the baying of hunting horns. I looked up the street. Sailing towards me like an image from an involuntarily recalled memory was the Face.

"Woe!" the crowd wailed. "Oh woe! Dead. Dead!" Tears streamed down every face, and every body moved to the beat of those awful drums. "The Prince! Woe!" And the Face continued.

It was huge, at least thirty feet high, carved out of some dark, gray flecked rock. The eyes, blank and pitiless, stared into mine, and beyond me, to infinity. The lips were curved in a slight smile, like that of a Buddha, but seemed to be arrested in the process of changing to some more definite expression. What would it have been? A grin? A scowl? A grimace of pain, or anger? Or a mindless nullity? The Face was of stone and would carry that secret forever. There were creases in the cheeks, and the nose was slightly bent at the end. The Prince was becoming a god, but obviously intended to keep his nose intact. A god is not handicapped by a twisted nose.

The sculpture rested on a great wagon, each of its many wheels reaching to twice the height of a man. It was pulled by teams of men and women, volunteers. Everyone wanted to help, and unseemly scuffles broke out for places on the ropes. The drummers seated below the god's chin occasionally enforced justice by clubbing someone with their brass drumsticks. And the crowd cried "Woe!"

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The Face swept by, becoming, from behind, a rough hewn, lumbering mountain of stone.

The mood of the crowd changed. Like a shadowed pool of blood in the corner of a slaughterhouse suddenly illuminated by shutters flung open on sunlight, the black despair of the crowd was revealed as scarlet imperfectly perceived. Icicles grew on my spine as shouts of rage and upraised daggers greeted the approach of the second Face. The daggers . . .

"Murderer!" they cried. "Death!" Though essentially a thirty-foot-high stone wanted poster, the sculptors had lavished no less care on this Face than on that of the Prince. Its brows were knit in jealous rage, its eyes glowered. Its lips were pulled back in a contemptuous grin, challenging us all to do our worst. Though fleshier and more dissipated than I remembered, the Face was familiar. It should have been. I looked at it every morning in the mirror when I shaved. It was my own.

The sculptors had done their work well. So compelling was the Face that no one noticed my real face as, shaking with fear, I slipped through the crowd. Their daggers, with silver hilts chased with a pattern of eyes and lightning bolts, were also familiar. The last time I had seen one, it had been sticking out of a bedpost next to my head.

Martine! It had been him the whole time. He'd sent his creations to kill me in Schekaagau, and when that had failed, he'd exposed me to radiation from his Virgin Mary, so that the cumulative dosage from my visit to Berenson's radioactive world would kill me. Hell, he'd probably locked me in my room at Cuzco. But for what? My wife? It made no sense, but then, murder often made no sense, at least to the victim. But didn't the idiot know that none of this was real?

So Martine had created this entire world just to kill me, despite what Halicarnassus had said about my ego. I should have been flattered, but it's hard to feel flattered when you've pissed in your pants and are fleeing for your life.

I quickly became lost in the tangle of streets, though I really had no idea of where I was going, or for what reason. Everywhere was equally dangerous in this city of Laoyin. The houses were all about four stories high, of cracked stucco, and leaned crazily. The air smelled of frying fish and fermented black beans. I turned a corner into a dusty square. A group of locals sat gloomily around a nonfunctioning fountain. I slunk past them, trying to look nonchalant. I almost made it.

"Look, Daddy!" a little boy said, pointing at me. "Prince!"

"No it isn't. It's—" Their knives were out in an instant. They didn't waste time debating points of tactics, but launched themselves at me in a mass. I turned and ran.

The tangled streets, confusing enough at a walk, were a nightmare at

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a dead run. Every few seconds I ran into a wall or the sharp corner of a building. I began to gain on my pursuers. Despite their hatred, they still had some concern for their bodies. I could not afford to have any.

I broke clear of the high buildings and found myself on a wide promenade, paved with multicolored slabs of rock and bordered on my left by an ornamental railing. Through the railing, far below, were the waters of the Lao, as they flowed towards what I knew as Puget Sound. Leaning casually on the railing, as if on the parapet of his palace, was Martine. He held a gun in his hand, slightly nervously, as if unsure of what to do with it. He had been unable to resist taking a direct hand in things, despite all of his efforts to set up a perfect trap for me. I *was* trapped. I stopped. Would he posture, preen, and carry on first, or would he simply gun me down? Right on the first guess.

"At last," he said. "At last I can have my revenge."

"What? What the hell are you talking about?"

"You have tormented and ruined me. I did my best, I poured my soul into my art, but it was not enough for you. My genius was never enough." He raised the pistol. "Say your prayers, Jacob."

"Wait a minute, for God's sake."

"Nothing can stay my hand now, Jacob. Compose yourself for death."

"I'll compose myself for anything you want, if you tell me what you're going on about. You've got Amanda, what more do you want?"

He frowned, confused. "Amanda? What does Amanda have to do with this? How can you mock my work, humiliate me, degrade me—"

I should have known. I grinned in relief. "Is that it? You're all upset because of some lousy reviews? Don't be ridiculous."

His finger whitened on the trigger. "You have destroyed me. Now I destroy you."

"For crissakes, Salvator, are you crazy? Who takes critics seriously?" I was almost in tears. Here I'd finally found someone who paid attention to my criticism, and he wanted to kill me for it. It wasn't fair.

"Make your peace with God, though I have no doubt that you'll pick enough with Him that He'll wish He never created you." Martine was proving to be an extremely gabby murderer.

A knot of people emerged from an alleyway behind Martine. Seeing that he had held me prisoner rather than killing me outright made them smile. It's always nice when someone is willing to share.

I nodded. "All right, Samos. Take him."

Martine snorted. "A feeble ruse, Jacob."

The first man in the group brushed past Martine's elbow. With a shriek, he turned and fired, blowing the man's chest open and leaving him with a surprised and offended expression on his face. Before Martine could get the barrel pointed back in my direction, the blades were into him, silver

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into scarlet. He screamed once. That done, the blades turned towards me. With the sharp decisiveness that makes for John Doe corpses in the morgue, I took three quick steps and threw myself over the railing into the air. I don't know if I screamed. I know that those behind me did, in disappointment. I watched the river. It didn't seem to get any closer, just more detailed, ripples, whirlpools, and flotsam appearing and sharpening as if on a developing piece of film.

I must have remembered Halicarnassus's modification to my Key subconsciously, because the next instant I found myself, sweating and soiled, in the dark hallway beneath Centrum.

She was home, sitting in the quiet room reading a book about Caravaggio. She looked up at me as I entered, smiled, then went back to her reading, saying nothing. It was not a silence that could be easily broken, for it seemed to me that it would shatter into a thousand pieces at the first word. I walked to the bedroom, took a shower, and changed into household clothes. There was no clothing out, no suitcase, and everything was folded neatly in the drawers. I breathed. The air smelled, just slightly, of jasmine. Jasmine? I went to the kitchen.

Amanda had cleaned up the remains of the final lunch Halicarnassus and I had had together. I opened the green kitchen curtains to have a view of the garden and began to pull out ingredients. Had the knives always been on the left side of the drawer? How observant was a critic? I examined the curtains. Still green. The last time I had seen them, at lunch, they had been red. That I remembered.

One Shadow differing from another in only one minor, but significant way. Amanda and I had had a discussion about those curtains. I had wanted green, but finally gave in. My hand shook a little as I chopped the onions, as I began to realize that Halicarnassus had sent me drifting through Shadow, with no way to ever return to the world I had spent my whole life believing was the real one.

I flipped the top of the garbage can up to throw away the onion peels. Inside, crumpled, was a set of red curtains. A note was pinned to them. "You'll never know," it said. "Get used to it." It didn't need a signature.

I stir fried beef and ginger, and thought about the woman in the other room. Was this the woman I had married, who had betrayed me? Or was this someone else? If Amanda was different enough that she would not betray me, could I still love her? I was adrift in a sea of infinite worlds, so I was starting to think that it didn't really matter. I could discuss it with Halicarnassus, when we finally ran into each other again. Somehow, I was sure that we would.

When it was finished, I took the food in to Amanda. It tasted very good. ●

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THE ROSE GARDEN

by Steven Popkes

art: Terry Lee

It's been two-and-a-half years since we've published a story by Steven Popkes, and we welcome his return to *IAsfm* with this quietly moving story. Happily, we have two of his thoughtful tales in our inventory, and his first novel, *Caliban's Landing*, will be forthcoming from our *Isaac Asimov Presents* line this fall.

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Antonia did not like the rain.

On days like this, when the summer waters came down gently, fully, inexorably, she longed for winters with their actinic sunlight.

But in the winter the Paedash migrated south near the equator and the plains were covered only by a gray, stubborn tundra. She liked that less than the rain.

So she stood on the chair to see out the dirty window toward the rose garden. The gray fence leaned in and out, crooked as a drunkard's walk, the wet wood as paintless as rock, enclosing the garden's overgrown jumble of thorns and flowers. She could see the old fountain, choked with brambles and half-filled with matted soil washed down by the rain.

Beyond the garden were the Paedash, the real reason she chose this window. If she could not walk between their boles and under their spherical leaves, she could at least watch them from a distance, swaying together as elephants in dance. Antonia had been a literate child and had first seen pictures of earth elephants when she was very young. She had found them in a book, very old and broken with mold and dry rot, in the dim, dusty room her mother referred to as "the library." The library had belonged to Antonia's father, Andrei, and her mother never entered the room. Andrei and Josef, Antonia's brother, were killed in the Mutiny. The library was Antonia's favorite place.

That the Paedash were plants and only resembled elephants in bulk and slight motion did not bother her. Such details were not important.

"Where's Fyodor?" her mother asked behind her. Antonia turned to the voice.

Catherine Brobeck stood behind her, shallowly smoking a cigarette. She wore an ancient dirty white gown torn through at the elbows. "Antonia?" she called, this time confused and quavering.

"Here, mama." Antonia did not move towards her, wary. "Mama? Do you hear me?"

Catherine did not answer but watched the ash on the cigarette. The ash had grown nearly an inch long. She stared at it fixedly as the tobacco smoldered towards her fingers. The coal touched the skin and Antonia could smell the hair burn. Antonia trembled. Catherine made no sound. The ash fell suddenly.

"Ha!" Catherine cried. "Damn near two inches that time." She looked at her finger. "Hurts," she said vaguely.

Antonia relaxed, came to her and took her other hand. "Mama?" she said softly.

"Yes, baby. What is it?" Her mother smiled at her.

Antonia led Catherine down the hall towards the kitchen. "You called me?"

"Call you? You were by the window. I was remembering when Andrei

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and I were married here." Her eyes became dreamy. "The house was so bright. The Paedash were holding the lights over the garden. The roses were in bloom . . ." She paused, looking blank. Her face grew wild. She took Antonia and shoved her against the wall, pinning her shoulders. "What were you looking at outside? What? Tell me!" Her eyes burned fever bright.

"The rose garden," she said, lying. Her shoulders hurt and she could barely speak. "Only the rose garden!"

Her mother stood, looked at her hands, then at Antonia. "Yes, of course." She let Antonia go, hid her hands in the fold of the dress and looked away. "The rose garden. What did you see there?"

"Roses."

"Yes. You would see that." She stared off into the next room, unseeing. Tears came down her cheeks and she looked grief-stricken. "Where's Fyodor?" she asked blankly.

Antonia took her to the kitchen and bandaged her hand.

Every Thursday at two o'clock, her uncle Fyodor brought their week's groceries. He rode his horse, Leo, from the south, following the road religiously from his small house to the old Brobeck mansion and never taking the shorter route through the Paedash forest. Antonia knew this, for when she was a child one afternoon as he rode back, she beat him home by cutting through the forest. She burst out in front of the horse and the big roan shied away from her. He calmed it, laughing nervously, looking at her, then the forest. He insisted on carrying her back to her mother on Leo, taking again the road south to the fork, and back again up towards her house. Antonia thought this silly, but she loved the smell of him, of saddle soap and wool, of the dogs he kept and the herbs of his garden.

The day gradually cleared and by the afternoon the sky was a deep violet blue, the Paedash a rich rust red. Antonia waited for Fyodor on the porch, watching the road and across the road the Paedash. Her world was marked by extremes, her uncle, solid as earth, and her mother, as changeable as weather. The seasons of Georgia, its settled roots deep in the soviet province, mirrored those extremes. The humid, chokingly hot summers would give way to dry, cold winters. Humans lived here in a narrow temperate band north and south of the equator. The Paedash followed the most livable weather. Livable for plants could be defined as the right water, the right light and the right heat to photosynthesize. Antonia lived in North, the country north of the equator. She knew the Paedash, listened to them. At times it was as if they spoke to her, the echo of a voice, the hollow within a shout.

Fyodor rounded the road's curve into view. Not really thinking or

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watching for him any more, he seemed to ride over the curve in the earth, appearing from South, half a world away. He rode Leo at a walk, preoccupied. When he reached the yard, he dismounted and tied Leo to the rose garden fence. She walked to him and stood before him, expecting to be hugged. "Uncle Fyodor." She smiled.

Instead, he lifted her and held her close. "Antonia," Fyodor murmured.

"What? Did you say something?" she asked, startled. He wasn't the same. He did not laugh or tell her anything new from home.

Fyodor set her down and looked down at her. "You are how old? Twelve?"

"You know how old I am." She laughed nervously. He smiled slightly and she grew frightened. "Thirteen. I am thirteen." She backed away from him, stopped when she saw the hurt come into his eyes.

"What do you think of school?" he asked.

She shook her head. "I don't know. I've never been."

Fyodor took the saddlebags of food from Leo and they sat on the edge of the porch together. Antonia watched him out of the corner of her eye. She held her hands together.

He fidgeted, brought out his pipe and filled the bowl with tobacco. Flakes spilled onto his pants and he brushed at them irritably. He stopped when he saw her watching him, smiled slowly and took a deep breath, emptied the pipe and put it away. He watched the Paedash. "You were two during the Mutiny. Do you remember any of it?"

"No." She looked at her hands. "I don't have a good memory, I guess."

"At two? No one has a good memory that young. It's all right." When he said that, some of the Fyodor she knew came out, the bedrock calm, the kindness. The strange Fyodor, the nervous, indecisive, unknown Fyodor diminished. She relaxed a little.

"We don't speak of it," he continued. "What do you know of it?"

She shrugged. "It was a war. Like the old earth wars."

"Who fought? And why?"

"I don't know, really." She stared at her hands, frightened again.

He sighed and lowered his voice. "Please. It's important."

Antonia wouldn't look at him. "We play a game . . ."

"Who?"

"Me. Leonid from near you. Nikita. Maria. We *used* to play it. It's a kid's game."

"What's the game?"

"Jack South."

He didn't speak for a moment, then asked her in a strangled voice: "How is this game played?"

Antonia glanced at him briefly. His eyes were closed. "You get a group together. One of them gets to be Jack South. He sings:

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Jack sings from the forest.
From there comes the chorus.
Go crazy and come join us.
All burn down!

"Then, he divides the group into the crazies and the dead."

"The crazies and the dead," repeated Fyodor, his eyes still closed.

Antonia nodded. "Then, the crazies and the dead play war."

"Who wins?"

She shrugged. "Depends on who's Jack South." He didn't respond to her. She rubbed her hands together. "I played it all while I was a little kid. I haven't played it for a couple of years. It made me feel funny. It's a kid's game."

He nodded at last, opened his eyes and looked so sad Antonia forgot to be afraid of him and touched his hand. He took her smaller hand and held it in his two large ones.

"Was the Mutiny like that?" she asked.

"Yes," he said distantly. "Andrei and Josef were killed that way."

Antonia felt confused. "Who were the crazies?"

He looked at her and smiled strangely, though the pain was clear on his face. "Why, we were, of course."

"Then," she asked slowly, "who was Jack South?"

He did not answer, but straightened his back and breathed deeply. Gradually, it seemed to Antonia, his strength flowed back into him, filling him, making him larger. He reached out a bear-like arm and drew her across the leather bags to his side, holding her. She hugged him.

"Antonia," he said after a time, "I have a great deal to discuss with your mother."

"She's inside," Antonia said, trying to be helpful.

He looked down at her, again her Uncle Fyodor. "Good. Will you do me a favor?"

"Yes." She smiled at him.

"Would you leave us alone this afternoon. Come back, say, dinner time. Would you do that for me?"

She nodded. "I'll go see Nikita."

"Do that. Tell him hello for me." He stood and took the groceries. He looked at the Paedash momentarily and his expression was lost again. He brought himself back and grinned at her. "Until dinnertime." He left her and went inside the house.

She stood for a few minutes on the porch, looking inside after him. Then, she jumped into the yard and ran down the road towards Nikita's, nothing in her now but the need to run.

Nikita Perchikoff was sitting outside his family's barn watching the

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forest. His brother and his aunt had been killed in the Mutiny, leaving only he and his father to run the farm. He idly chewed a twig. He was nearly fifteen, and was already a thin attenuated boy with big eyes and a stiff, formal smile.

"Think they'll mind?" she called to him.

The hand holding the twig twitched and Antonia knew she had startled him.

"No," he said as she sat on the bench beside him. "They don't feel anything like twigs. The squirrels chew on them, don't they? The Paedash don't feel that."

"They aren't really squirrels," corrected Antonia. "I've seen real squirrels in books. From earth."

Nikita shrugged.

"What are you doing?"

"Watching them. What do you think?"

Antonia waited for him to explain. In a collection of bright if unschooled children, Nikita shone with brilliance. He did not seem aware of the impact he had on Antonia, which made Antonia put him in a class with her Uncle Fyodor.

"I was thinking about what the Paedash bring with them. The squirrels, the wolves, the bushes—all of the forest. When they leave, nothing's left but the tundra." Abruptly, he turned to her. "Hear about the sensitives?"

"Sensitives?"

"Turns out some people can actually *talk* with them. There's a school for them in Andropov." He didn't say anything for a moment. "I'd like to be able to do that."

"Who told you?"

"Leonid. He heard about it from his mother. She wants to send him." The disgust was evident in his voice.

"Leonid! He carves his initials in their trunks." To Antonia, there was no greater sin.

"I know it. *He* knows it. He just wants to stay here and raise pigs." Nikita shook his head. "*I'm* going to the university in Dansk."

"Why does his mother want him to go?"

He snorted. "Some status thing, I guess. Mrs. Petrovich would saw off both Leonid's feet at the ankles if she could be," he imitated Mrs. Petrovich's high, nasal whine " 'as big here as the old Brobeck family.' "

Antonia laughed. "Nothing's much left of that. Catherine talks about it sometimes."

"Yeah," said Nikita. "I remember it a little."

"Tell me?"

"I don't remember much," Nikita confessed. "The house was always

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lit up bright. And the Paedash underworkers were everywhere, in the fields, around the grounds. One took care of you, I think. That's all."

"I don't remember anything," she said, feeling wistful. "It must have been beautiful."

"You were real young." They fell silent, one remembering just an impression of time past, the other trying to imagine it.

"I want to play Jack South again," said Antonia suddenly.

"That's a kid's game." Nikita shifted uneasily.

"No, it's not. You know it's not," she heard herself say.

"Sure it is. I haven't played it in years."

"Why not?" she demanded.

"I don't know," he said, looking first at the forest, then back at her. "I just felt strange."

"Me, too. I want to play now. I want to," she paused, thinking, "to know why it felt strange."

"We need more kids," he said, stalling.

"We do not. We can just play the Jack South part."

"You can do that yourself."

"I can't. I don't want to. It," she looked down, "scares me."

He nodded. "Yeah. It scares me, too."

"Well?"

"Okay," he said reluctantly and stood up.

They walked deep into the Paedash forest. The spherical leaves spilled shadow over them. The forest was hushed, the animals moving quickly over the trees and the ground making no sound. The tundra was thick and springy under them and they could see the fresh turned earth between the newly dropped roots of the trees. Hitchhiker bushes had separated from the trees and were closing slowly over the ground. Though the forest was silent, Antonia could almost hear murmurings, chants, or a low, vibrant hum.

They found a likely looking clearing between three giants, trees fifty or more feet high. Like grandfathers, she thought.

"You want to be Jack South?" Nikita asked lamely.

"Not really," said Antonia, hesitant now, feeling a presence around them.

"You *ought* to. You wanted to come here."

"I will. All right, I will."

She stood away from him and began to sing:

"Jack sings of the forest . . ."

Something moved in her, a touch, a harmony. She sang louder, not remembering the words, humming through the parts she could not recall. She heard Nikita gasp and didn't care. She danced as she sang, and someone danced and sang with her.

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Who? she asked herself.

I don't know. Suddenly frightened, she stopped. In front of her was one of the giants, holding itself out of the ground on its mobile roots, quivering, swaying back and forth with her. She backed away from it, her hand over her mouth. Nikita was next to her.

"It just moved over to you. Lifted itself right out of the ground." He sounded awed.

"Oh no," she whispered, "oh no." She grabbed Nikita by the shirt front.

The Paedash eased itself down on its main trunk and its roots slid easily into the earth. They could see now, on its side, a worn plastic case bolted to the trunk.

"An orderbox," breathed Nikita. He pulled away from her and stood in front of it. "That's how they used to run them. Antonia, the ones on your farm had these!"

"It was the one that took care of me, maybe?" she asked no one in particular.

Nikita didn't hear her. He had pulled out his knife and was scraping the overgrown bark from the edge of the orderbox.

"Don't hurt it," she begged.

He stopped and looked at her, pale. "Is it hurting, do you think?"

She looked at the Paedash. "I don't know. I don't think so."

"Good." He traced the thin line of the case with his knife. "They were supposed to remove all of these after the Mutiny."

"Do you remember the Mutiny?" Antonia asked eagerly.

"No," he said shortly.

She reached for his shoulder. "You're lying to me," she said slowly.

"Yes. All right, I remember."

"Tell me."

He turned to her. "I can't. I don't want to."

"Please. I don't know anything."

He turned back to the orderbox. It sprang open. "It's voice controlled, I think." There was a switch inside painted bright yellow. Nikita pulled it down. Two red lights came on inside the orderbox.

Antonia felt panic around her. "I don't think this is a good idea."

Nikita ignored her. "If it's voice controlled . . . Stand up!"

The Paedash rose stiffly, ponderously onto its mobile roots. Antonia felt pain, deep fear and a great sadness. "Nikita," she said.

Nikita smiled, a twisted smile of someone who knows he is doing wrong but stubbornly refuses to admit it. "Waltz," he said.

"Nikita!" she screamed as the pain overwhelmed her and she went for his throat. She knocked him down and they rolled over and over in the dirt. Towering over them, the Paedash danced, first on one root, then on another.

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"Antonia! I'll stop!" he yelled. "I'll stop!"

She struck him with her fists, filled with maniacal strength. All she could see or hear or feel was the pain of the Paedash, dancing against its will.

Nikita pushed her away, bleeding from his lips and nose. She rolled against one of the other trees and stopped, blinking. Snarling, she picked up a large rock. He scrambled for the orderbox and pushed up the yellow switch as she raised the stone.

The pain died in her, replaced with relief and a vegetative feeling of complacency. The Paedash settled back into the soil. She dropped the rock, seeing Nikita for the first time. "Nikita," she called softly and knelt beside him. He cringed away.

"Not again," he whispered.

She tore her jacket and cleaned his face. He blew his nose and the cloth came away bloody.

"I'll be okay," he said. "You didn't really hurt me."

She sat back ashamed. "I couldn't help it. It hurt."

"The crazies couldn't help it either," Nikita said bitterly. "They dragged people screaming from the houses. Burned them up if they couldn't get them outside." He looked at her. "That was the Mutiny. Half of everybody going crazy and killing the other half. For some damned tree." He struck at the bark of the Paedash. The Paedash did not respond. "All burn down," he muttered.

"I'm one of those sensitives you were talking about."

"We're all sensitives. Who do you think the crazies were?"

"I can talk to them. No, not talk. Feel them? Know them?" She shook her head.

He stared at her. "I thought so as soon as Leonid told me about the school."

"Why didn't you tell me?"

"I didn't want you to go away," he said simply.

"*You're* going away, to Dansk."

"Not for a long time, anyway."

She felt a sinking sensation in her stomach. "That's where Uncle Fyodor wants me to go," she said softly.

"What?"

"Nikita, they're going to send me *away*!" She buried her head in his shoulder and sobbed.

He held her, looking confused. "What are you talking about?"

While she was crying, she told him of her uncle earlier that afternoon.

"What'll I do?"

"I don't know," said Nikita.

* * *

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It was night when she returned.

The front room had the stiff silence of an aborted argument. Fyodor stood staring at the floor, his unlit pipe in his hand. He had not looked up when Antonia entered. Catherine sat on the couch watching Antonia, holding herself as if she had been struck.

"Baby?" she called softly. "You won't leave, will you? Promise me."

Antonia walked over to her slowly, dizzy with the tensions in the room. Catherine held her.

"Promise me," she crooned in a voice like a drill.

She smelled of cigarette smoke and old, dirty clothing, of the moldering smell of the house. The smell and her voice and the low, undervoiced mutterings between Fyodor and Catherine confused Antonia and made her feel nauseous.

"Answer me," said Catherine, her voice harsh. "You're all I have left."

Antonia brought her gaze to Catherine's face and Catherine looked afraid.

"She knows," Catherine said, her voice climbing. "Where were you this afternoon? Spying? What were you doing?" She raised her hand.

Fyodor grabbed her and held her high. "Catherine!" he roared.

Antonia watched the two of them grapple. She backed out the door onto the front porch, closed the door and turned towards the forest. She closed her eyes.

After a time, she heard Fyodor put Catherine to bed. Soon, he came out onto the porch. The night was warm and close, as clear as crystal.

"I think you had better come home with me, this night." He leaned against the post watching the sky.

"I'll stay here." Her voice was small.

"Antonia," he began, then stopped, began again. "Your mother's not well."

"She's crazy," Antonia said simply. "But she won't send me away. She wants me."

"Who wants to send you away?"

She looked up towards him but his face was in darkness. "You do. You want to send me to that school in Andropov."

"Who told you that?"

"Nobody. I figured it out. I won't go." She drummed her heels against the porch. "I don't want to go."

Fyodor coughed and shifted towards her, stopped when she stared at him. "Your mother gets . . . sicker every year. I'm afraid for you."

"She won't hurt me."

"She might."

"She *hasn't*. She only hurts herself." Antonia felt tears begin to fall.

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"If I go, nobody'll take care of her when she burns herself, or when she falls down, or breaks something."

"I'll take care of her."

"You won't. You'll send her away like you want to send me away." From the sudden stillness, she knew she spoke truth, and the tears fell faster.

"You don't understand . . ." he said softly.

She did not answer him.

At last, he stood, smaller than she thought. "She'll sleep all right. I gave her a sedative. I'll be back early in the morning."

Antonia shook her head. "We don't need you."

He untied Leo. "Maybe not." With that, he dug his heels into Leo's flank and left her.

Antonia did not know how long she stood on the porch after Fyodor had gone. The moon came out and made the shadows silver, the Paedash branches covered with Christmas ornaments. She left the porch and moved into the yard, watching the forest, the nightbirds. The forest, as always, swayed, making no sound.

"Jack sings from the forest," she sang and began to cry again. She felt something reach for her, drawn by her. She let it come and didn't look through her tears for a long time. When she did, the Paedash she had danced with settled into the ground before her. She felt it, now, as she knew she had felt them all. Nikita was wrong. She could no more speak with them than she could with Leo. No human could. They were too different. What the two of them could do, and this was little enough, was sit next to one another, or dance together, or sense each other's great, block emotions. Neither knew what those emotions, that depth or that dance meant. This was sensitivity.

She heard the porch door swing open.

Catherine stood there, a white ghost in the moonlight, her face a silver blur. She was silent, then went back inside.

Antonia felt uneasy. Catherine was supposed to be sleeping. "Go back," she said to the Paedash. Nothing happened. Had she expected anything different? She tried to feel her way into the Paedash, to tell it to leave. Nothing. Catherine came out again, holding a stick with a wad of cloth on the end. As Antonia watched, she lit it.

Antonia scrambled around the side of the tree, yanked open the orderbox, pulled down the switch. "Go to the forest. Wait for me. *Go!*"

Ponderously, in a mixture of pain and betrayal that nearly blinded Antonia, the Paedash stood and began to walk down to the forest. Catherine followed it.

Antonia stumbled after. Catherine did not see her, her eyes fixed on

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the forest, a little smile on her lips. Her face was as bloodless as death. Antonia reached up and grabbed the torch, pulled it down to the ground and stamped on it until it was out.

Catherine dropped the other end and stared at Antonia. Her eyes were huge caverns, her mouth half open. Her teeth glowed in the light.

"Mama?" said Antonia softly. The sound was swallowed up in silence. She backed away.

Catherine followed her. She matched Antonia step for step, as Antonia backed up the yard. Antonia couldn't stop looking at her. Antonia's right arm brushed against something and she felt of it. It was the gate of the rose garden. She couldn't catch her breath and her stomach hurt. The gate moved and the ancient garden shovel fell between them.

Catherine stopped. Antonia continued backing into the garden. Catherine picked up the shovel slowly, and smiled, and lunged.

Antonia screamed and broke for the rose bushes, Catherine running after her.

The thorns ripped at her clothes and she slowed, then heard Catherine behind her. She looked behind her. Catherine threw the shovel at her and she jumped to one side. The shovel struck the earth like a knife.

Antonia ran between two tall, overgrown hedges, blind in the sudden shadow. At the end, there were only rose bushes. She could hear her mother behind her. She dove under the thorns and crawled over old, broken brambles to the trunk. Catherine hacked at the brambles, stopped, then struck the bush. Antonia sat there and trembled. "Go away," she whispered. "Mama, go away."

Catherine fell silent.

In a little while, Antonia felt as if she could breathe again. "All right," she said. She felt her way through the thorns, biting her tongue so that she might not cry out, to the other side of the bush. She eased out from under the roses and looked up.

Catherine was waiting for her, the shovel high in the air.

Antonia pulled back under the bush and the shovel struck earth where her head had been. The scraping of the shovel against stone was like metal against bone. Antonia returned to the trunk of the bush and froze.

Catherine stabbed randomly into the thorns. "I swore you'd never know," she muttered. "I promised Josef and Andrei."

The hollow space around the trunk of the rose continued down the row. As quietly as she could, stifling the pain as the thorns gashed her knees and ankles, she moved down the row away from Catherine and pushed out of the brambles. She looked back. Catherine was still striking at the bush where Antonia had been, her breath coming in angry sobs.

Antonia moved to where the fence leaned out and climbed on it.

"Antonia!"

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"No, mama," she cried and jumped across it. She ran down the yard and across the road.

"Antonia, come back. Come back," her mother called over and over. "Andrei, Josef. Come back." Antonia disappeared into the forest.

She found the tree by following its trail of pain and fear. She turned off the orderbox and sat on the ground next to the tree, dull. Her hands hurt and she looked at them. They were ripped and bleeding. As she looked, she gradually felt the rest of her body. There were great gashes on her arms and one on her face. She felt aching punctures on her knees and shins. Her feet were stuck to the inside of her shoes with blood.

"Are you all right?" came a voice.

She tumbled around the tree and hid.

"It's me. It's Nikita. I heard your mother."

She looked around the tree. Nikita stood in the faint light.

"She was going to kill me," Antonia said as she came around the tree.

"Are you all right? You look a mess."

"No." She shook her head. "She tried to *kill* me."

"You're bloody all over."

"I know."

Nikita turned and looked at her back. "We've got to get you out of here. I'm going to take you to your uncle's."

She did not answer.

"Is that all right?"

Silence.

"Can you walk?"

She nodded. He led her through the forest to Fyodor's farm. Fyodor opened the door and she smiled up at him. "Uncle Fyodor."

"She killed Papa and Josef, didn't she?"

Fyodor had bathed her and dressed the wounds with herbs. She bore the stinging in silence. He picked her up and sat her on the sofa. Nikita helped as he could.

"What happened?" asked Fyodor after she spoke.

"Did she?"

Fyodor nodded slowly. "When Jack South sang, we all heard him. We all heard the Paedash. That was his gift, to bring out what we didn't know we heard. All of the sensitive people. All of the crazies."

"I know about that."

Fyodor was silent a moment. "I shouldn't have left you there."

Antonia shrugged. "Tell me."

Fyodor stared at his hands. "The madness faded after a while. We didn't think. We just—we were animals biting at a cage. A cage not our

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own. I came to myself watching the Perchikoff house burn, knowing I set the flames."

"You—" began Nikita.

Fyodor stared at Nikita with a cold anger. "Don't think only the Brobecks kill their own. Your father killed Old Man Petrovich and his son. Mrs. Petrovich helped." The anger faded and all that was left was weariness. "I almost went crazy again when I remembered Catherine. Andrei. Josef. You. I rode Leo to the mansion until he stumbled up the yard. You were crying in the library."

"At first, I thought, the house is still standing. It must be all right. But I couldn't find Catherine. I could find no one but you. I looked all through the house and then stood in the window, confused and frightened. I could see into the rose garden, where Catherine was standing. She didn't move, but I could see the knife and the bodies."

The breath came out of him then and made the flames in the fireplace dance. His voice went leaden flat. "I stayed with her all that winter. She wouldn't get out of touching distance from you. She seemed to get better for a while. Then, then she got worse."

Antonia did not speak for a long time. "You had better go see to her. And give me some money. And give me the name of that school."

"The Institute of Human Responsibility," he said automatically. "Antonia—"

"You go see to my mother," she said, smiling. "Or I shall return for you."

Fyodor looked at her and shuddered. He went to the wall and opened the safe, looked at her a moment, then left. She didn't look at him, the smile still on her face.

Antonia turned to Nikita for the first time. "Will your father loan us his cart?"

Nikita nodded slowly. "I suppose."

She took his hand. "Thank you, Nikita. I need you to take me to the train station."

"There aren't any trains running now."

She nodded. "I know. I'll wait. Will you wait with me?"

He took her other hand in his. "I will."

She sat next to the window as the train skirted the edge of the mountains before it began the long descent to Andropov's valley. The lights of the city calmed her. They gleamed like pin-prick stars. She sat up and stared and the city of Andropov was gone. For a short moment, before it had been masked by the trees, she had see in the lights of the city the face of a woman she did not know, her face of rose petals, her hands of thorns. ●

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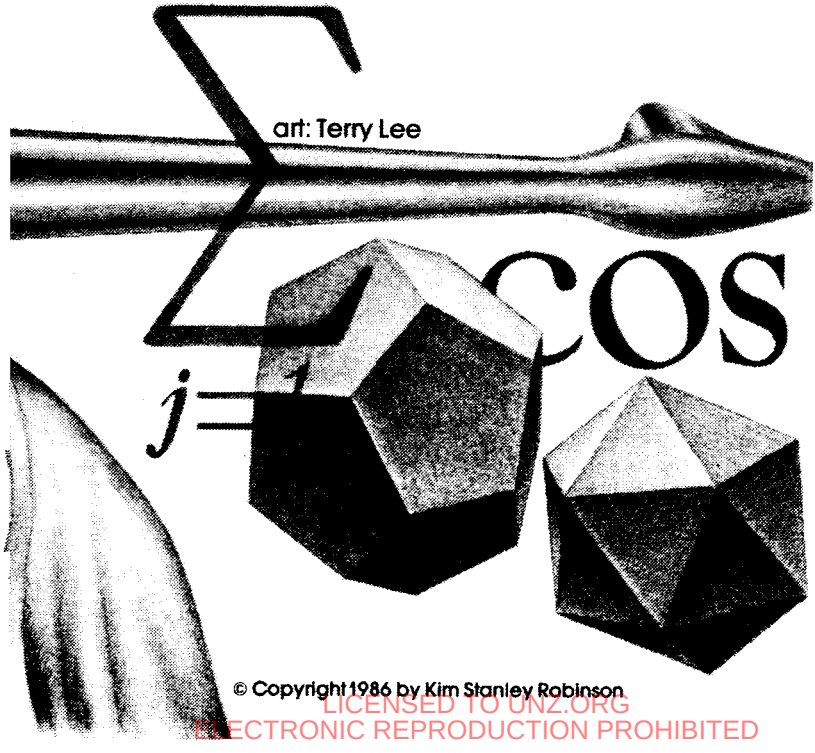
THE BLIND GEOMETER

by Kim Stanley Robinson

Mr. Robinson's most recent story in *IAsfm*—his hilarious novella, "Escape from Kathmandu" (September 1986)—was a Nebula award finalist. He returns to our pages with a gripping tale of suspense which we doubt you will soon forget.

art: Terry Lee



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When you are born blind, your development is different from that of sighted infants. (I was born blind, I know.) The reasons for this difference are fairly obvious. Much normal early infant development, both physical and mental, is linked to vision, which co-ordinates all sense and action. Without vision reality is . . . (it's hard to describe) a sort of void, in which transitory things come to existence when grasped and mouthed and heard—then when the things fall silent or are dropped, they melt away, they *cease to exist.* (I wonder if I have not kept a bit of that feeling with me always.) It can be shown that this sense of *object permanence* must be learned by sighted infants as well—move a toy behind a screen and very young babies will assume the toy has ceased to exist—but vision (seeing part of a toy [or a person] behind the screen, etc.) makes their construction of a sense of object permanence fairly rapid and easy. With the blind child it is a much harder task, it takes months, sometimes years. And with no sense of an object world, there can be no complementary concept of *self*; without this concept, all phenomena can be experienced as part of an extended "body." (Haptic space [or tactile space, the space of the body] expanding to fill visual space . . . .) Every blind infant is in danger of autism.

> "But we also have, and know that we have, the capacity of complete freedom to transform, in thought and phantasy, our human historical existence. . . ."
>
> Edmund Husserl, *The Origin of Geometry*

My first memories are of the Christmas morning when I was some three-and-a-half years old, when one of my gifts was a bag of marbles. I was fascinated by the way the handfuls of marbles felt in my hands: heavy glassy spheres, all so smooth and clickety, all so much the same . . . I was equally impressed by the leather bag that had contained them. It was so pliable, had such a baggy shape, could be drawn up by such a leathery draw string. (I must tell you, from the viewpoint of tactual aesthetics, there is nothing quite so beautiful as well-oiled leather. My favorite toy was my father's boot). Anyway, I was rolling on my belly over the marbles spread on the floor (more contact) when I came against the Christmas tree, all prickly and piney. Reaching up to break off some needles to rub between my fingers, I touched an ornament that felt to me, in my excitement, like a lost marble. I yanked on it (and on the branch, no doubt) and—down came the tree.

The alarum afterward is only a blur in my memory, as if it all were on tape, and parts of it forever fast-forwarded to squeaks and trills. Little unspliced snippets of tape: my memory. (My story.)

* * *

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How often have I searched for snippets before that one, from the long years of my coming to consciousness? How did I first discover the world beyond my body, beyond my searching hands? It was one of my greatest intellectual feats—perhaps the greatest—and yet it is lost to me.

So I read, and learn how other blind infants have accomplished the task. My own life, known to me through words—the world become a text—this happens to me all the time. It is what T.D. Cutsforth called entering the world of "verbal unreality," and it is part of the fate of the curious blind person.

I never did like Jeremy Blasingame. He was a colleague for a few years, and his office was six doors down from mine. It seemed to me that he was one of those people who are fundamentally uncomfortable around the blind; and it's always the blind person's job to put these people at their ease, which gets to be a pain in the ass. (In fact, I usually ignore the problem.) Jeremy always watched me closely (you can tell this by voice), and it was clear that he found it hard to believe that I was one of the co-editors of *Topological Geometry*, a journal he submitted to occasionally. But he was a good mathematician, and a fair topologist, and we published most of his submissions, so that he and I remained superficially friendly.

Still, he was always probing, always picking my brains. At this time I was working hard on the geometry of n-dimensional manifolds, and some of the latest results from CERN and SLAC and the big new cyclotron on Oahu were fitting into the work in an interesting way: it appeared that certain sub-atomic particles were moving as if in a multi-dimensional manifold, and I had Sullivan and Wu and some of the other physicists from these places asking me questions. With them I was happy to talk, but with Jeremy I couldn't see the point. Certain speculations I once made in conversation with him later showed up in one of his papers, and it just seemed to me that he was looking for help without actually saying so.

And there was the matter of his image. In the sun I perceived him as a shifting, flecked brightness. It's unusual I can see people at all, and as I couldn't really account for this (was it vision, or something else?) it made me uncomfortable.

But no doubt in retrospect I have somewhat exaggerated this uneasiness.

The first event of my life that I recall that has any emotion attached to it (the earlier ones being mere snips of tape that could have come from anyone's life, given how much feeling is associated with them) comes from my eighth year, and has to do, emblematically enough, with math.

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I was adding columns with my Braille punch, and excited at my new power, I took the bumpy sheet of figures to show my father. He puzzled over it for a while. "Hmm," he said. "Here, you have to make very sure that the columns are in straight vertical rows." His long fingers guided mine down a column. "Twenty-two is off to the left, feel that? You have to keep them all straight."

Impatiently I pulled my hand away, and the flood of frustration began its tidal wash through me (most familiar of sensations, felt scores of times a day); my voice tightened to a high whine: "But *why*? It doesn't *matter*—"

"Yeah it does." My father wasn't one for unnecessary neatness, as I already knew well from tripping over his misplaced briefcase, ice skates, shoes. . . . "Let's see." He had my fingers again. "You know how numbers work. Here's twenty-two. Now what that means, is two twos, and two tens. This two marks the twenty, this two marks the two, even though they're both just two characters, right? Well, when you're adding, the column to the far right is the column of ones. Next over is the column of tens, and next over is the columns of hundreds. Here you've got three hundreds, right? Now if you have the twenty-two over to the left too far, you'll add the twenty in the hundreds column, as if the number were two hundred twenty rather than twenty-two. And that'll be wrong. So you have to keep the columns really straight—"

Understanding, ringing me as if I were a big old church bell, and it the clapper. It's the first time I remember feeling that sensation that has remained one of the enduring joys of my life: *to understand.*

And understanding mathematical concepts quickly led to power (and how I craved that!), power not only in the abstract world of math, but in the real world of father and school. I remember jumping up and down, my dad laughing cheerily, me dashing to my room to stamp out columns as straight as the ruler's edge, to add column after column of figures.

Oh yes: Carlos Oleg Nevsky, here. Mother Mexican, father Russian (military advisor). Born in Mexico City in 2018, three months premature, after my mother suffered a bout of German measles during the pregnancy. Result: almost total blindness (I can tell dark from [bright] light.) Lived in Mexico City until father was transferred to Soviet embassy in Washington, DC, when I was five. Lived in Washington almost continuously since then; my parents divorced when I was fifteen. Mathematics professor at George Washington University since 2043.

One cold spring afternoon I encountered Jeremy Blasingame in the faculty lounge as I went to get a coffee refill—in the lounge, where nobody ever hangs out. "Hello, Carlos, how's it going?"

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"Fine," I said, reaching about the table for the sugar. "And you?"

"Pretty good. I've got a kind of an interesting problem over at my consulting job, though. It's giving me fits."

Jeremy worked for the Pentagon in military intelligence or something, but he seldom talked about what he did there, and I certainly never asked. "Oh yes?" I said as I found the sugar and spooned some in.

"Yes. They've got a coding problem that I bet would interest you."

"I'm not much for cryptography." Spy games—the math involved is really very limited. Sweet smell of sugar, dissolving in the lounge's bad coffee.

"Yes, I know," Jeremy said. "But—" An edge of frustration in his voice; it's hard to tell when I'm paying attention, I know. (A form of control.) "But this may be a geometer's code. We have a subject, you see, drawing diagrams."

A *subject*. "Hmph," I said. Some poor spy scribbling away in a cell somewhere. . . .

"So—I've got one of the drawings here. It reminds me of the theorem in your last article. Some projection, perhaps."

"Yes?" Now what spy would draw something like that?

"Yeah, and it seems to have something to do with her speech, too. Her verbal sequencing is all dislocated—words in strange order, sometimes."

"Yes? What happened to her?"

"Well. . . . Here, check out the drawing."

I put out a hand. "I'll take a look."

"And next time you want coffee, come ask me. I do a proper job of it in my office."

"All right."

I suppose I have wondered all my life what it would be like to see. And all my work, no doubt, is an effort to envision things in the inward theater. "I see it *feelingly*." In language, in music, most of all in the laws of geometry, I find the best ways I can to see: by analogy to touch, and to sound, and to abstractions. Understand: to know the geometries fully is to comprehend exactly the physical world that light reveals; in a way one is then perceiving something like the Platonic ideal forms underlying the visible phenomena of the world. Sometimes the great ringing of comprehension fills me so entirely that I feel I *must* be seeing; what more could it be? I believe that I see.

Then comes the problem of crossing the street, of finding my misplaced keys. Geometry is little help; it's back to the hands and ears as eyes, at that point. And then I know that I do not see at all.

Let me put it another way. Projective geometry began in the Renais-

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sance, as an aid to painters newly interested in perspective, in the problems of representing the three dimensional world on a canvas; it quickly became a mathematics of great power and elegance. The basic procedure can be described quickly: when a geometrical figure is *projected* from one plane to another (as light, they tell me, projects the image on a slide onto a wall), certain properties of the figure are changed (lengths of sides, measures of angles), while other properties are not: points are still points, lines lines, and certain proportions still hold, among other things.

Now imagine that the visual world is a geometrical figure, which in a way it is. But then imagine that it has been projected inward onto something different, not onto a plane, but onto a Moebius strip or a Klein bottle say, or really, onto a manifold much more complex and strange than those (you'd be surprised). Certain features of the figure are gone for good (color, for instance), but other essential features remain. And projective geometry is the art of finding what features or qualities survive the transformations of projection. . . .

Do you understand me?

A geometry for the self—non-Euclidean, of course; in fact, strictly Nevskyan, as it has to be to help me, as I make my projections from visual space to auditive space, to haptic space.

The next time I met Blasingame he was anxious to hear what I thought of his diagram. (There could be an acoustics of emotion—thus a mathematics of emotion; meanwhile the ears of the blind do these calculations every day.)

"One drawing isn't much to go on, Jeremy. I mean, you're right, it looks like a simple projective drawing, but with some odd lines crossing it. Who knows what they mean? The whole thing might be something scribbled by a kid."

"She's not that young. Want to see more?"

"Well. . ." This woman he kept mentioning, some sort of Mata Hari prisoner in the Pentagon, drawing geometrical figures and refusing to speak except in riddles . . . naturally I was intrigued.

"Here, take these anyway. There seems to be a sort of progression."

"It would help if I could talk to this *subject* who's doing all these."

"Actually, I don't think so—but" (seeing my irritation) "I can bring her by, I think, if these interest you."

"I'll check them out."

"Good, good." Peculiar edge of excitement in his voice, tension, anticipation of . . . frowning, I took the papers from him.

That afternoon I shuffled them into my special Xerox machine, and the stiff reproductions rolled out of it heavily ridged. I ran my hands over the raised lines and letters slowly.

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Here I must confess to you that most geometrical drawings are almost useless to me. If you consider it you will quickly see why: most drawings are two-dimensional representations of what a three-dimensional construction *looks* like. This does me no good, and in fact is extremely confusing. Say I feel a trapezoid on the page; is that meant to be a trapezoid, or is it rather a representation of a rectangle not coterminous with the page it lies on? Or the conventional representation of a plane? Only a *description* of the drawing will tell me that. Without a description I can only deduce what the figure *appears* to mean. Much easier to have 3-D models to explore with my hands.

But in this case, not possible. So I swept over the mish-mash of ridges with both hands, redrew it with my ridging pen several times over, located the two triangles in it, and the lines connecting the two triangles' corners, and the lines made by extending the triangles' sides in one direction. I tried to make from my Taylor collection a 3-D model that accounted for the drawing—try that sometime! and understand how difficult this kind of intellectual feat can be. Projective imagination. . . .

Certainly it seemed to be a rough sketch of Desargues' Theorem.

Desargues' Theorem was one of the first theorems clearly concerned with projective geometry; it was proposed by Girard Desargues in the mid-seventeenth century, in between his architectural and engineering efforts, his books on music, etc. It is a relatively simple theorem, showing that two triangles that are projections of each other generate a group of points off to one side that lie on a single line. Its chief interest is in showing the kind of elegant connections that projection so often creates.

(It is also true that this theorem is reciprocal, that is, if you postulate two triangles whose extensions of the sides meet at three collinear points, then it is possible to show that the triangles are projections of each other. As they say in the textbooks, I leave the proof of this as an exercise for the reader.)

But so what? I mean, it is a beautiful theorem, with the sort of purity characteristic of Renaissance math—but what was it doing in a drawing made by some poor prisoner of the Pentagon?

I considered this as I walked to my health club, Warren's Spa (considered it secondarily, anyway, and no doubt subconsciously; my primary concerns were the streets and the traffic. Washington's streets bear a certain resemblance to one of those confusing geometrical diagrams I described [the state streets crossing diagonally the regular gridwork, creating a variety of intersections]; happily one doesn't have to comprehend all the city at once to walk in it. But it is easy to become lost. So as I walked I concentrated on distances, on the sounds of the streets that

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tended to remain constant, on smells [the dirt of the park at M and New Hampshire, the hot dog vendor on 21st and K]; meanwhile my cane established the world directly before my feet, my sonar shades whistled rising or falling notes as objects approached or receded. . . . It takes some work just to get from point A to point B without getting disoriented [at which point one has to grind one's teeth and ask for directions] but it can be done, it is one of those small tasks/accomplishments [one chooses which, every time] that the blind cannot escape)—still, I did consider the matter of the drawing as I walked.

On 21st and H I was pleased to smell the pretzel cart of my friend Ramon, who is also blind. His cart is the only one where the hot plate hasn't roasted several pretzels to that metallic burnt odor that all the other carts put off; Ramon prefers the clean smell of freshly baked dough, and he claims it brings him more customers, which I certainly believe. "Change only please," he was saying to someone briskly, "there's a change machine on the other side of the cart for your convenience, thanks. Hot pretzels! Hot pretzels, one dollar!"

"Hey there, Superblink!" I called as I approached him.

"Hey yourself, Professor Superblink," he replied. (*Superblink* is a mildly derogatory name used by irritated sighted social service people to describe those of their blind colleagues who are aggressively or ostentatiously competent in getting around, etc., who make a *display* of their competence. Naturally we have appropriated the term for our own use; sometimes it means the same thing for us—when used in the third person, usually—but in the second person it's a term of affection.) "Want a pretzel?"

"Sure."

"You off to the gym?"

"Yeah, I'm going to throw. Next time we play you're in trouble."

"That'll be the day, when my main mark starts beating me!"

I put four quarters in his calloused hand and he gave me a pretzel. "Here's a puzzle for you," I said. "Why would someone try to convey a message by geometrical diagram?"

He laughed. "Don't ask me, that's your department!"

"But the message isn't for me."

"Are you sure about that?"

I frowned.

At the health club I greeted Warren and Amanda at the front desk. They were laughing over a headline in the tabloid newspaper Amanda was shaking; they devoured those things, and pasted the best headlines all over the gym.

"What's the gem of the day?" I asked.

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"How about 'Gay Bigfoot Molests Young Boys'?" Warren suggested.

"Or 'Woman Found Guilty of Turning Husband into Bank President,' " Amanda said, giggling. "She drugged him and did 'bemod' to him until he went from teller to president."

Warren said, "I'll have to do that for you, eh Amanda?"

"Make me something better than a bank president."

Warren clicked his tongue. "Entirely too many designer drugs, these days. Come on, Carlos, I'll get the range turned on." I went to the locker room and changed, and when I got to the target room Warren was just done setting it up. "Ready to go," he said cheerily as he rolled past me.

I stepped in, closed the door, and walked out to the center of the room, where a waist-high wire column was filled with baseballs. I pulled out a baseball, hefted it, felt the stitching. A baseball is a beautiful object: nicely flared curves of the seams, over the surface of a perfect sphere, exactly the right weight for throwing.

I turned on the range with a flick of a switch, and stepped away from the feeder, a ball in each hand. Now it was quite silent, only the slightest whirr faintly breathing through the soundproofed walls. I did what I could to reduce the sound of my own breathing, heard my heartbeat in my ears.

Then a *beep* behind me to my left, and low; I whirled and threw. Dull thud. "Right . . . low," said the machine voice from above, softly. *Beep* I threw again: "Right . . . high," it said louder, meaning I had missed by more. "Shit," I said as I got another two balls. "Bad start."

Beep—a hard throw to my left—*clang!* "Yeah!" There is very little in life more satisfying than the bell-like clanging of the target circle when hit square. It rings at about middle C with several overtones, like a small thick church bell hit with a hammer. The sound of success.

Seven more throws, four more hits. "Five for ten," the machine voice said. "Average strike time, one point three five seconds. Fastest strike time, point eight four seconds."

Ramon sometimes hit the target in half a second or less, but I needed to hear the full beep to keep my average up. I set up for another round, pushed the button, got quiet, *Beep* throw, *Beep* throw, working to shift my feet faster, to follow through, to use the information from my misses to correct for the next time the target was near the floor, or the ceiling, or behind me (my weakness is the low ones, I can't seem to throw down accurately.) And as I warmed up I threw harder and harder . . . just throwing a baseball as hard as you can is a joy in itself. And then to set that bell ringing! *Clang!* It chimes every cell of you.

But when I quit and took a shower, and stood before my locker and reached in to free my shirt from a snag on the top of the door, my fingers brushed a small metal wire stuck to an upper inside corner, where the

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door would usually conceal it from both me and my sighted companions; it came away when I pulled on it. Fingering the short length I couldn't be certain what it was, but I had my suspicions, so I took it to my friend James Gold, who works in acoustics in the engineering department, and had him take a confidential look at it.

"It's a little remote microphone, all right," he said, and then joked: "Who's bugging you, Carlos?"

He got serious when I asked him where I could get a system like that for myself.

> "John Metcalf—'Blind Jack of Knaresborough'—(1717-1810). At six he lost his sight through small-pox, at nine he could get on pretty well unaided, at fourteen he announced his intention of disregarding his affliction thenceforward and of behaving in every respect as a normal human being. It is true that immediately on this brave resolve he fell into a gravel pit and received a serious hurt while escaping, under pursuit, from an orchard he was robbing . . . fortunately this did not affect his self-reliance. At twenty he had made a reputation as a pugilist." (!)
>
> Ernest Bramah, Introduction,
> *The Eyes of Max Carrados*

When I was young I loved to read Bramah's stories about Max Carrados, the blind detective. Carrados could hear, smell, and feel with incredible sensitivity, and his ingenious deductions were never short of brilliant; he was fearless in a pinch; also, he was rich, and had a mansion, and a secretary, man-servant and chauffeur who acted as his eyes. All great stuff for the imaginative young reader, as certainly I was. I read every book I could get my hands on; the voice of my reading machine was more familiar to me than any human voice that I knew. Between that reading and my mathematical work, I could have easily withdrawn from the world of my own experience into Cutsforth's "verbal unreality," and babbled on like Helen Keller about the shapes of clouds and the colors of flowers and the like. The world become nothing but a series of texts; sounds kind of like deconstructionism, doesn't it? And of course at an older age I was enamored of the deconstructionists of the last century. The world as text—Husserl's *The Origin of Geometry* is twenty-two pages long, Derrida's *Introduction to the Origin of Geometry* is a hundred and fifty-three pages long—you can see why it would have appealed to me. If, as the deconstructionists seemed to say, the world is nothing but a collection of texts, and I can read, then I am not missing anything by being blind, am I?

The young can be very stubborn, very stupid.

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* * *

"All right, Jeremy," I said. "Let me meet this mysterious *subject* of yours who draws all this stuff."

"You want to?" he said, trying to conceal his excitement.

"Sure," I replied. "I'm not going to find out any more about all this until I do." My own subtext, yes; but I am better at hiding such things than Jeremy is.

"What have you found out? Do the diagrams mean anything to you?"

"Not much. You know me, Jeremy, drawings are my weakness. I'd rather have her do it in models, or writing, or verbally. You'll have to bring her by if you want me to continue."

"Well, okay. I'll see what I can do. She's not much help, though. You'll find out." But he was pleased.

One time in high school I was walking out of the gym after P.E., and I heard one of my coaches (one of the best teachers I have ever had) in his office, speaking to someone (he must have had his back to me)—he said, "You know, it's not the physical handicaps that will be the problem for most of these kids. It's the emotional problems that tend to come with the handicaps that will be the real burden."

I was in my office listening to my reading machine. Its flat, uninflected mechanical voice (almost unintelligible to some of my colleagues) had over the years become a sort of helpless, stupid friend. I called it George, and was always programming into it another pronunciation rule to try to aid its poor speech, but to no avail; George always found new ways to butcher the language. I put the book face down on the glass; "Finding first line," croaked George, as the scanner inside the machine thumped around. Then it read from Roberto Torretti, quoting and discussing Ernst Mach. (Hear this spoken in the most stilted, awkward, syllable by syllable mispronunciation that you can imagine.)

" 'Our notions of space are rooted in our *physiological* constitution' " (George raises his voice in pitch to indicate italics, which also slow him down considerably). " 'Geometric concepts are the product of the idealization of *physical* experiences of space.' Physiological space is quite different from the infinite, isotropic, metric space of classical geometry and physics. It can, at most, be structured as a topological space. When viewed in this way, it naturally falls into several components: visual or optic space, tactile or haptic space, auditive space, etc. Optic space is anisotropic, finite, limited. Haptic space or 'the space of our skin corresponds to a two-dimensional, finite, unlimited (closed) Riemannian space.' This is nonsense, for R-spaces are metric while haptic space is not. I take it that Mach means to say that the latter can naturally be

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regarded as a two-dimensional compact connected topological space. Mach does not emphasize enough the disconnectedness of haptic from optic space—"

There came four quick knocks at my door. I pressed the button on George that stopped him, and said "Come in!"

The door opened. "Carlos!"

"Jeremy," I said. "How are you."

"Fine. I've brought Mary Unser with me—you know—the one who drew—"

I stood, feeling/hearing the presence of the other in the room. And there are times (like this one) when you *know* the other is in some odd, undefinable way, *different*, or . . . (Our language is not made for the experience of the blind.) "I'm glad to meet you."

I have said that I can tell dark from light, and I can, though it is seldom very useful information. In this case, however, I was startled to have my attention drawn to my "sight"—for this woman was darker than other people, she was a sort of bundle of darkness in the room, her face distinctly lighter than the rest of her (or was that her face, exactly?).

A long pause. Then: "On border stand we *n*-dimensional space the," she said. Coming just after George's reading, I was struck by a certain similarity: the mechanical lilt from word to word; the basic incomprehension of a reading machine. . . . Goose-bumps rose on my forearms.

Her voice itself, on the other hand, had George beat hands down. Fundamentally vibrant under the odd intonation, it was a voice with a very thick timbre, a bassoon or a hurdy-gurdy of a voice, with the buzz of someone who habitually speaks partly through the sinuses; this combined with over-relaxed vocal cords, what speech pathologists call *glottal fry*. Usually nasal voices are not pleasant, but pitch them low enough. . . .

She spoke again, more slowly (definitely glottal fry): "We stand on the border of *n*-dimensional space."

"Hey," Jeremy said. "Pretty good!" He explained: "Her word order isn't usually as . . . ordinary as that."

"So I gathered," I said. "Mary, what do you mean by that?"

"I—*oh*—" A kazoo squeak of distress, pain. I approached her, put out a hand. She took it as if to shake: a hand about the size of mine, narrow, strong fat muscle at base of thumb; trembling distinctly.

"I work on the geometries of topologically complex spaces," I said. "I am more likely than most to understand what you say."

"Are within never see we points us."

"That's true." But there was something wrong here, something I didn't like, though I couldn't tell exactly what it was. Had she spoken toward Jeremy? Speaking to me while she looked at him? Bundle of darkness in the dark . . . "But why are your sentences so disordered, Mary? Your

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words don't come out in the order you thought them. You must know that, since you understand us."

"Folded—*oh*!—" Again the double-reed squeak, and suddenly she was weeping, trembling hard, we sat her down on my visitor's couch and Jeremy got her a glass of water, while she quaked in my hands. I stroked her hair (short, loosely curled, wild) and took the opportunity for a quick phrenological check: skull regular and as far as I could tell, undamaged; temples wide, distinct; same for eyesockets; nose a fairly ordinary pyramidal segment, no bridge to speak of; narrow cheeks, wet with tears. She reached up and took my right hand, squeezed it hard, three times fast, three times slow, all the time sobbing and sort of hiccoughing words: "Pain it, station, I, oh, fold end, bright, light, space fold, oh, ohhh. . . ."

Well, the direct question is not always the best way. Jeremy returned with a glass of water, and drinking some seemed to calm her. Jeremy said, "Perhaps we could try again later. Although—" He didn't seem very surprised.

"Sure," I said. "Listen, Mary, I'll talk to you again when you're feeling better."

After Jeremy got her out of the office and disposed of her (how? with whom?) he returned to the seventh floor.

"So what the hell happened to her?" I asked angrily. "Why is she like that?"

"We aren't completely sure," he said slowly. "Here's why. She was one of the scientists staffing Tsiolkovsky Base Five, up in the mountains on the back side of the moon, you know. She's an astronomer and cosmologist. Well—I have to ask you to keep this quiet—one day Base Five stopped all broadcasting, and when they went over to see what was wrong, they found only her, alone in the station in a sort of catatonic state. No sign of the other scientists or station crew—eighteen people gone without a trace. And nothing much different to explain what had happened, either."

I *hmphed*. "What do they think happened?"

"They're still not sure. Apparently no one else was in the area, or could have been, et cetera. It's been suggested by the Russians, who had ten people there, that this could be first contact—you know, that aliens took the missing ones, and somehow disarranged Mary's thought processes, leaving her behind as a messenger that isn't working. Her brain scans are bizarre. I mean, it doesn't sound very likely—"

"No."

"But it's the only theory that explains everything they found there. Some of which they won't tell me about. So, we're doing what we can to

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get Mary's testimony, but as you can see, it's hard. She seems most comfortable drawing diagrams."

"Next time we'll start with that."

"Okay. Any other ideas?"

"No," I lied. "When can you bring her back again?"

As if because I was blind I couldn't tell I was being duped! I struck fist into palm angrily. Oh, they were making a mistake, all right. They didn't know how much the voice reveals. The voice's secret expressivity reveals *so much*!—the language really is not adequate to tell it, we need that mathematics of emotion. . . . In the high school for the blind that I briefly attended for some of my classes, it often happened that a new teacher was instantly disliked, for some falseness in his or her voice, some quality of condescension or pity or self-congratulation that the teacher (and his or her superiors) thought completely concealed, if they knew of it at all. But it was entirely obvious to the students, because the voice (if what I have heard is true) is much more revealing than facial expressions; certainly it is less under our control. This is what makes most acting performances so unsatisfactory to me; the vocal qualities are so stylized, so removed from those of real life. . . .

And here, I thought, I was witnessing a performance.

There is a moment in Olivier Messiaen's *Visions de l'Amen* when one piano is playing a progression of major chords, very traditionally harmonic, while on another piano high pairs of notes plonk down across the other's chords, ruining their harmony, crying out Something's wrong! Something's wrong!

I sat at my desk and swayed side to side, living just such a moment. Something was wrong.

When I collected myself I called the department secretary, who had a view of the hall to the elevator. "Delphina, did Jeremy just leave?"

"Yes, Carlos. Do you want me to try and catch him?"

"No, I only need a book he left in his office. Can I borrow the master key and get it?"

"Okay."

I got the key, entered Jeremy's office, closed the door. One of the tiny pick-ups that James Gold had gotten for me fit right under the snap-in plug of the telephone cord. Then a microphone under the desk, behind a drawer. And out. (I have to be bold every day, you see, just to get by. But they didn't know that.)

Back in my office I closed and locked the door, and began to search. My office is big: two couches, several tall bookcases, my desk, a file cabinet, a coffee table. . . . When the partitions on the seventh floor of the Gelman Library were moved around to make more room, Delphina

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and George Hampton, who was chairman that year, had approached me nervously: "Carlos, you wouldn't mind an office with no windows, would you?"

I laughed. All of the full professors had offices on the outer perimeter of the floor, with windows.

"You see," George said, "since none of the windows in the building opens anyway, you won't be missing out on any breezes. And if you take this room in the inner core of the building, then we'll have enough space for a good faculty lounge."

"Fine," I said, not mentioning that I could see sunlight, distinguish light and dark. It made me angry that they hadn't remembered that, hadn't thought to ask. So I nicknamed my office "The Vault," and I had a lot of room, but no windows. The halls had no windows either, so I was really without sun, but I didn't complain.

Now I got down on hands and knees and continued searching, feeling like it was hopeless. But I found one, on the bottom of the couch. And there was another in the phone. Bugged. I left them in position and went home.

Home was a small top-floor apartment up near 21st and N Streets, and I supposed it was bugged too. I turned up Stockhausen's *Telemusik* as loud as I could stand it, hoping to drive my listeners into a suicidal fugal state, or at least give them a headache. Then I slapped together a sandwich, downed it angrily.

I imagined I was captain of a naval sailing ship (like Horatio Hornblower), and that because of my sharp awareness of the wind I was the best captain afloat. They had had to evacuate the city and all the people I knew were aboard depending on me. But we were caught against a lee shore by two large ships of the line, and in the ensuing broadsides (roar of cannon, smell of gunpowder and blood, screams of wounded like shrieking seagulls), everyone I knew fell—chopped in half, speared by giant splinters, heads removed by cannonball, you name it. Then when they were all corpses on the sand-strewn splintered decking, I felt a final broadside discharge, every ball converging on me as if I were point 0 at the tip of a cone. Instant dissolution and death.

I came out of it feeling faintly disgusted with myself. But because it actively defends the ego by eradicating those who attack its self-esteem, Cutsforth calls this type of fantasy in the blind subject healthy. (At least in fourteen year-olds.) So be it. Here's to health. Fuck all of you.

Geometry is a language, with a vocabulary and syntax as clear and precise as humans can make them. In many cases definitions of terms and operations are explicitly spelled out, to help achieve this clarity. For instance, one could say:

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Let (parentheses) designate corollaries.
Let [brackets] designate causes.
Let {braces} designate . . .
But would it be true, in this other language of the heart?

Next afternoon I played beepball with my team. Sun hot on my face and arms, spring smell of pollen and wet grass. Ramon got six runs in the at-bat before mine (beepball is a sort of cricket/softball mix, played with softball equipment ["It proves you can play cricket blind" one Anglophobe {she was Irish} said to me once]), and when I got up I scratched out two and then struck out. Swinging *too* hard. I decided I liked outfield better. The beepball off in the distance, lofted up in a short arc, smack of bat, follow the ball up and up—out toward me!—drift in its direction, the rush of fear, glove before face as it approaches, stab for it, off after it as it rolls by—pick it up—Ramon's voice calling clearly, "Right here! Right here!"—and letting loose with a throw—really putting everything into it—and then, sometimes, hearing that beepball lance off into the distance and smack into Ramon's glove. It was great. Nothing like outfield.

And next inning I hit one *hard*, and that's great too. That feeling goes right up your arms and all through you.

Walking home I brooded over Max Carrados, blind detective, and over Horatio Hornblower, sighted naval captain. Over Thomas Gore, the blind senator from Oklahoma. As a boy his fantasy was to become a senator. He read the *Congressional Record*, joined the debate team, organized his whole life around the project. And he became senator. I knew that sort of fantasy as well as I knew the vengeful adolescent daydreams: all through my youth I dreamed of being a mathematician. And here I was. So one could do it. One could imagine doing something, and then do it.

But that meant that one had, by definition, imagined something *possible*. And one couldn't always say ahead of the attempt whether one had imagined the possible or the impossible. And even if one had imagined something possible, that didn't guarantee a successful execution of the plan.

The team we had played was called *Helen Keller Jokes* (there are some good ones, too [they come {of course} from Australia] but I won't go into that). It's sad that such an intelligent woman was so miseducated—not so much by Sullivan as by her whole era: all that treacly Victorian sentimentality poured into her, "The fishing villages of Cornwall are very picturesque, seen either from the beaches or the hilltops, with all their boats riding to their moorings or sailing about in the harbor—When the moon, large and serene, floats up the sky, leaving in the water a long

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track of brightness like a plow breaking up a soil of silver, I can only sigh my ecstasy" come on, Helen. Now that is living in a world of texts.

But didn't I live most (all?) of my life in texts as least as unreal to me as moonlight on water was to Helen Keller? These *n*-dimensional manifolds . . . I suppose the basis for my abilities in them was the lived reality of haptic space, but still, it was many removes from my actual experience. And so was the situation I found myself confronted with now, Jeremy and Mary acting out some drama I did not comprehend . . . and so was my plan to deal with it. Verbalism, words versus reality. . . .

I caressed my glove, refelt the knock of bat against beepball. Brooded over my plan.

The next time Jeremy brought Mary Unser by my office, I said very little. I got out my "visitor's supply" of paper and pencils, and set her down at the coffee table. I brought over my models: subatomic particles breaking up in a spray of wire lines, like water out of a showerhead; straw-like Taylor sticks for model-making; polyhedric blocks of every kind; and I sat down with the ridged sheets made from her earlier drawings, and the models I had attempted to make of them, and I started asking very limited questions. "What does this line mean? Does it go before or behind? Is this R or R'? Have I got this right?"

And she would honk a sort of laugh, or say "No, no, no, no," (no problem with sequencing there) and draw furiously. I took the pages as she finished them and put them in my Xerox, took out the ridged, bumpy sheets and had her guide my fingers over them. Even so they were difficult, and with a squeak of frustration she went to the straw models, clicking together triangles, parallels, etc. This was easier, but eventually she reached a limit here too. "Need drawing beyond," she said.

"Fine. Write down whatever you want."

She wrote, and then read aloud to me, or I put it through the Xerox machine marked *translation to Braille.* And we forged on, with Jeremy looking over our shoulders the whole time.

And eventually we came very close to the edge of my work, following subatomic particles down into the micro-dimensions where they appeared to make their "jumps." I had proposed an *n*-dimensional topological manifold, where $1<n<$ infinity, so that the continuum being mapped fluctuated between one and some finite number of dimensions, going from a curving line to a sort of *n*-dimensional Swiss cheese, if you like, depending on the amounts of energy displayed in the area, in any of the four "forms" of electromagnetism, gravity, or the strong and weak interactions. The geometry for this manifold-pattern (so close to the experience of haptic space) had, as I have said, attracted the attention of

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physicists at CERN and SLAC—but there were still unexplained data, as far as I could tell, and the truth was *I had not published this work.*

So here I was "conversing" with a young woman who in ordinary conversations could not order her words correctly—who in this realm spoke with perfect coherence—who was in fact speaking about (inquiring about?) the edges of my own private work.

The kind of work that Jeremy Blasingame used to ask me about so curiously.

I sighed. We had been going on for two or three hours, and I sat back on the couch. My hand was taken up in Mary's, given a reassuring squeeze. I didn't know what to make of it. "I'm tired."

"I feel better," she said. "Easier to talk way—this way."

"Ah," I said. I took up the model of a positron hitting a "stationary" muon: a wire tree, trunk suddenly bursting into a mass of curling branches. . . . So it was here: one set of events, a whole scattering of explanations. Still, the bulk of the particles shot out in a single general direction (the truths of haptic space).

She let go of my hand to make one last diagram. Then she Xeroxed it for me, and guided my hands over the ridged copy.

Once again it was Desargues' Theorem.

At this point Mary said, "Mr. Blasingame, I need a drink of water." He went out to the hall water dispenser, and she quickly took my forefinger between her finger and thumb (pads flattening with an inappropriate pressure, until my finger ached)—squeezed twice, and jabbed my finger first onto her leg, then onto the diagram, tracing out one of the triangles. She repeated the movements, then poked my leg and traced out the other triangle. Then she traced down the line off to the side, the one generated by the projection of the two triangles, over and over. What did she mean?

Jeremy returned, and she let my hand go. Then in a while, after the amenities (hard handshake, quivering hand) Jeremy whisked her off.

When he returned, I said, "Jeremy, is there any chance I can talk to her alone? I think she's made nervous by your presence—the associations, you know. She really does have an interesting perspective on the *n*-dimensional manifold, but she gets confused when she stops and interacts with you. I'd just like to take her for a walk, you know—down by the canal, or the Tidal Basin, perhaps, and talk things over with her. It might get the results you want."

"I'll see what they say," Jeremy said in an expressionless voice.

That night I put on a pair of earplugs, and played the tape of Jeremy's phone conversations. In one when the phone was picked up he said,

"He wants to talk with her alone now."

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"Fine," said a tenor voice. "She's prepared for that."
"This weekend?"
"If he agrees." Click.

I listen to music. I listen to twentieth century composers the most, because many of them made their music out of the sounds of the world we live in now, the world of jets and sirens and industrial machinery, as well as birdsong and woodblock and the human voice. Messiaen, Partch, Reich, Glass, Shapiro, Subotnik, Ligeti, Penderecki—these first explorers away from the orchestra and the classical tradition remain for me the voices of our age, they speak to me. In fact they speak for me; in their dissonance and confusion and anger I hear myself being expressed. And so I listen to their difficult, complex music because I understand it, which gives me pleasure, and because while doing I am participating fully, I am excelling, no one can bring more to the act than I. I am *in control.*

I listened to music.

You see, these *n*-dimensional manifolds . . . if we understood them well enough to manipulate them, to tap their energy . . . well, there is a tremendous amount of energy contained in those particles. That kind of energy means power, and power . . . draws the powerful. Or those seeking power, fighting for it. I began to feel the extent of the danger.

She was quiet as we walked across the Mall toward the Lincoln Monument. I think she would have stopped me if I had spoken about anything important. But I knew enough to say nothing, and I think she guessed I knew she was bugged. I held the back of her upper arm loosely in my left hand, and let her guide us. A sunny, windy day, with occasional clouds obscuring the sun for a minute or two. Down by the Mall's lake the slightly stagnant smell of wet algae tinged all the other scents: grass, dust, the double strand of lighter fluid and cooking meat. . . . The sink of darkness swirling around the Vietnam Memorial. Pigeons cooed their weird, larger-than-life coos, and flapped away noisily as we walked through their affairs. We sat on grass that had been recently cut, and I brushed a hand over the stiff blades.

A curious procedure, this conversation. No visuals, for me; and perhaps we were being watched, as well. (Such a common anxiety of the blind, the fear of being watched—and here it was true.) And we couldn't talk freely, even though at the same time we had to say something, to keep Blasingame and friends from thinking I was aware of anything wrong. "Nice day." "Yeah. I'd love to be out on the water on a day like this." "Really?" "Yeah."

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And all the while two fingers held one finger. My hands are my eyes, and always have been. Now they were as expressive as voice, as receptive as ever touch can be, and into haptic space we projected a conversation of rare urgency. Are you okay? I'm okay. Do you know what's going on? Not entirely, can't explain.

"Let's walk down to the paddle boats and go out on the Basin, then."

I said, "Your speech is much better today."

She squeezed my hand thrice, hard. False information? "I . . . had . . . electroshock." Her voice slid, slurred; it wasn't entirely under control.

"It seems to have helped."

"Yes. Sometimes."

"And the ordering of your mathematical thought?"

Buzzing laugh, hurdy-gurdy voice: "I don't know—more disarranged, perhaps—complementary procedure? You'll have to tell me."

"As a cosmologist did you work in this area?"

"The topology of the micro-dimensions apparently determines both gravity and the weak interaction, wouldn't you agree?"

"I couldn't say. I'm not much of a physicist."

Three squeezes again. "But you must have an idea or two about it?"

"Not really. You?"

"Perhaps . . . once. But it seems to me your work is directly concerned with it."

"Not that I know of."

Stalemate. Was that right? I was becoming more and more curious about this woman, whose signals to me were so mixed. . . . Once again she seemed a bundling of darkness in the day, a whirlpool where all lightness disappeared, except for around her head. (I suppose I imagine all that I "see," I suppose they are always haptic visions.)

"Are you wearing dark clothes?"

"Not really. Red, beige. . . ."

As we walked I held her arm more tightly. She was about my height. Her arm muscles were distinct, and her lats pushed out from her ribs. "You must swim."

"Weight-lifting, I'm afraid. They made us on Luna."

"On Luna," I repeated.

"Yes," and she fell silent.

This really was impossible. I didn't think she was completely an ally—in fact I thought she was lying—but I felt an underlying sympathy from her, and a sense of conspiracy with her, that grew more powerful the longer we were together. The problem was, what did that feeling mean? Without the ability to converse freely, I was stymied in my attempts to learn more; pushed this way and that in the cross-currents of

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her behavior, I could only wonder what she was thinking. And what our listeners made of this mostly silent day in the sun.

So we paddled out onto the Tidal Basin, and talked from time to time about the scene around us. I loved the feel of being on water—the gentle rocking over other boats' wakes, the wet stale smell. . . . "Are the cherry trees blossoming still?"

"Oh yes. Not quite at the peak, but just past. It's beautiful. Here—" she leaned out— "here's one about to drown." She put it in my hand. I sniffed at it. "Do they smell?"

"No, not much," I said. "The prettier people say flowers are, the less scent they seem to have. Did you ever notice that?"

"I guess. I like the scent of roses."

"It's faint, though. These blossoms must be very beautiful—they smell hardly at all."

"En masse they are lovely. I wish you could see them."

I shrugged. "And I wish you could touch their petals, or feel us bouncing about as I do. I have enough sense data to keep entertained."

"Yes . . . I suppose you do." She left her hand covering mine. "I suppose we're out quite a ways," I said. So that we couldn't be seen well from the shore, I meant.

"From the dock, anyway. We're actually almost across the Basin."

I moved my hand from under hers, and held her shoulder. Deep hollow behind her collarbone. This contact, this conversation of touch . . . it was most expressive hand to hand, and so I took her hand again, and our fingers made random entanglements, explorations. Children shouting, then laughing in boats to our left, voices charged with excitement. How to speak in this language of touch?

Well, we all know that. Fingertips, brushing lines of the palm; ruffling the fine hair at the back of the wrist; fingers pressing each other back: these are sentences, certainly. And it is a difficult language to lie in. That cat-like sensuous stretch, under my stroking fingertips. . . .

"We've got a clear run ahead of us," she said after a time, voice charged with humming overtones.

"Stoke the furnaces," I cried. "Damn the torpedoes!" And with a gurgling *clug-clug-clug-clug* we paddle-wheeled over the Basin into the fresh wet wind, sun on our faces, laughing at the release from tension (bassoon and baritone), crying out "Mark twain!" or "Snag dead ahead!" in jocular tones, entwined hands crushing the other as we pedaled harder and harder . . . "Down the Potomac!" "Across the sea!" "Through the gates of Hercules!" "On to the Golden Fleece!" Spray cold on the breeze—

She stopped pedaling, and we swerved left.

"We're almost back," she said quietly.

We let the boat drift in, without a word.

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My bugs told me that my office had been broken into, by two, possibly three people, only one of whom spoke—a man, in an undertone: "Try the file cabinet." The cabinet drawers were rolled out (familiar clicking of the runners over the ball bearings), and the desk drawers too, and then there was the sound of paper shuffling, of things being knocked about.

I also got an interesting phone conversation over Jeremy's phone. The call was incoming; Jeremy said "Yes?" and a male voice—the same one Jeremy had called earlier—said, "She says he's unwilling to go into any detail."

"That doesn't surprise me," Jeremy said. "But I'm sure he's got—"

"Yes, I know. Go ahead and try what we discussed."

The break-in, I supposed.

"Okay." Click.

No doubt it never even occurred to them that I might turn the tables on them, or act against them in any way, or even figure out that something was strange. It made me furious.

At the same time I was frightened.You feel the lines of force, living in Washington, D.C.; feel the struggle for power among the shadowy groups surrounding the official government; read of the unsolved murders, of shadowy people whose jobs are not made clear. . . . As a blind person one feels apart from that nebulous world of intrigue and hidden force, on the edge by reason of disability. ("No one harms a blind man.") Now I knew I was part of it, pulled in and on my own. It was frightening.

One night I was immersed in Harry Partch's *Cloud Chamber Music*, floating in those big glassy notes, when my doorbell rang. I picked up the phone. "Hello?"

"It's Mary Unser. May I come up?"

"Sure." I pushed the button and walked onto the landing.

She came up the stairs alone. "Sorry to bother you at home," she buzzed, out of breath. Such a voice. "I looked up your address in the phone book. I'm not supposed . . ."

She stood before me, touched my right arm. I lifted my hand and held her elbow. "Yes?"

Nervous, resonant laugh. "I'm not supposed to be here."

Then you'll soon be in trouble, I wanted to say. But surely she knew my apartment would be bugged? Surely she *was* supposed to be here? She was trembling violently, enough so that I put up my other hand and held her by the shoulders. "Are you all right?"

"Yes. No." Falling oboe tones, laugh that was not a laugh. . . . She

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seemed frightened, very frightened. I thought, if she is acting she is *very* good.

"Come on in," I said, and led her inside. I went to the stereo and turned down the Partch—then reconsidered, and turned it back up. "Have a seat—the couch is nice." I was nervous myself. "Would you like something to drink?" Quite suddenly it all seemed unreal, a dream, one of my fantasies. Phantasmagoric cloud chamber ringing to things, how did I know what was real?

"No. Or yes." She laughed again, that laugh that was not a laugh.

"I've got some beer." I went to the refrigerator, got a couple of bottles, opened them.

"So what's going on?" I said as I sat down beside her. As she spoke I drank from my beer, and she stopped from time to time to take long swallows.

Well, I feel that the more I understand what you're saying about the transfer of energies between *n*-dimensional manifolds, the better I understand what . . . happened to me." But now there was a different sound to her voice—an overtone was gone, it was less resonant, less nasal.

I said, "I don't know what I can tell you. It's not something I can talk about, or even write down. What I can express, I have, you know. In papers." This a bit louder, for the benefit of our audience. (If there was one?)

"Well. . . ." and her hand, under mine, began to tremble again.

We sat there for a very long time, and all during that time we conversed through those two hands, saying things I can scarcely recall now, because we have no language for that sort of thing. But they were important things nevertheless, and after awhile I said, "Here. Come with me. I'm on the top floor, so I have a sort of a porch on the roof. Finish your beer. It's a pleasant night out, you'll feel better outside." I led her through the kitchen to the pantry, where the door to the back stairs was. "Go on up." I went back to the stereo and put on Jarrett's *Köln Concert,* loud enough so we'd be able to hear it. Then I went up the stairs onto the roof, and crunched over the tarred gravel.

This was one of my favorite places. The sides of the building came up to the chest around the edge of the roof, and on two sides large willows draped their branches over it, making it a sort of haven. I had set a big old wreck of a couch out there, and on certain nights when the wind was up and the air was cool, I would lie back on it with a bumpy Braille planisphere in my hands, listening to Scholz's *Starcharts* and feeling that with those projections I knew what it was to see the night sky.

"This is nice," she said.

"Isn't it?" I pulled the plastic sheet from the couch, and we sat.

"Carlos?"

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"Yes?"

"I—I—" that double-reed squeak—

I put an arm around her. "Please," I said, suddenly upset myself. "Not now. Not now. Just relax. Please." And she turned into me, her head rested on my shoulder; she trembled. I dug my fingers into her hair and slowly pulled them through the tangles. Shoulder length, no more. I cupped her ears, stroked her neck. She calmed.

Time passed, and I only caressed. No other thought, no other perception. How long this went on I couldn't say—perhaps a half-hour? Perhaps longer. She made a sort of purring kazoo sound, and I leaned forward and kissed her. Jarrett's voice, crying out briefly over a fluid run of piano notes. She pulled me to her, her breath caught, rushed out of her. The kiss became intense, tongues dancing together in a whole intercourse of their own, which I felt all through me in that *chakra* way, neck, spine, belly, groin, nothing but kiss. And without the slightest bit of either intention or resistance, I fell into it.

I remember a college friend once asked me, hesitantly, if I didn't have trouble with my love life. "Isn't it hard to tell when they . . . want to?" I had laughed. The whole process, I had wanted to say, was amazingly easy. The blind's dependence on touch puts them in an advance position, so to speak: using hands to see faces, being led by the hand (being dependent), one has already crossed what Russ calls the border between the world of not-sex and the world of sex; once over that border (with an other feeling protective). . . .

My hands explored her body, discovering it then and there for the first time: as intensely exciting a moment as there is, in the whole process. I suppose I expect narrow-cheeked people to be narrow-hipped (it's mostly true, you'll find), but it wasn't so, in this case—her hips flared in those feminine curves that one can only hold, without ever getting used to (without ever [the otherness of the other] quite believing). On their own my fingers slipped under clothes, between buttons, as adroit as little mice, clever lusty little creatures, unbuttoning blouse, reaching behind to undo bra with a twist. She shrugged out of them both and I felt the softness of her breasts while she tugged at my belt. I shifted, rolled, put my ear to her hard sternum, kissing the inside of one breast as it pressed against my face, feeling that quick heartbeat speak to me. . . . She moved me back, got me unzipped, we paused for a speedy moment and got the rest of our clothes off, fumbling at our own and each other's until they were clear. Then it it was flesh to flesh, skin to skin, in a single haptic space jumping with energy, with the insistent *yes* of caresses, mouth to mouth, four hands full, body to body, with breasts and erect penis crushed, as it were, between two pulsing walls of muscle.

The skin is the ultimate voice.

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So we made love. As we did (my feet jabbing the end of the couch, which was quite broad enough, but a little too short) I arched up and let the breeze between us (cool on our sweat), leaned down and sucked on first one nipple and then the other—

(thus becoming helpless in a sense, a needy infant, utterly dependent [because for the blind from birth, mother love is even more crucial than for the rest of us—the blind depend on their mothers for almost *everything*, for the sense of object permanence, for the education that makes the distinction between self and world, for the beginning of language, and also for the establishment of a private language that compensates for the lack of sight {if your mother doesn't know that a sweeping hand means "*I want*"!} and bridges the way to the common tongue—without all that, which only a mother can give, the blind infant is lost—without mother love beyond mother love, the blind child will very likely go mad] so that to suck on a lover's nipple brings back that primal world of trust and need, I am sure of it)

—I was sure of it even then, as I made love to this strange other Mary Unser, a woman as unknown to me as any I had ever spoken with. At least until now. Now with each plunge into her (cylinder capped by cone, sliding through cylinder into rough sphere, neuron to neuron, millions of them fusing across, so that I could not tell where I stopped and she began) I learned more about her, the shape of her, her rhythms, her whole nerve-reality, spoken to me in movement and touch (spread hands holding my back, flanks, bottom) and in those broken bassoon tones that were like someone humming, briefly, involuntarily. "Ah," I said happily at all this sensation, all this new knowledge, feeling all my skin and all my nerves swirl up like a gust of wind into my spine, the back of my balls, to pitch into her all my self—

When we were done (oboe squeaks) I slid down, bending my knees so my feet stuck up in the air. I wiggled my toes in the breeze. Faint traffic noises played a sort of city music to accompany the piano in the apartment. From the airshaft came the sound of a chorus of pigeons, sounding like monkeys with their jaws wired shut, trying to chatter. Mary's skin was damp and I licked it, loving the salt. Patch of darkness in my blur of vision, darkness bundling in it. . . . She rolled onto her side and my hands played over her. Her biceps made a smooth hard bulge. There were several moles on her back, like little raisins half buried in her skin. I pushed them down, fingered the knobs of her spine. The muscles of her back put her spine in a deep trough of flesh.

I remembered a day my blind science class was taken to a museum, where we were allowed to feel a skeleton. All those hard bones, in just the right places; it made perfect sense, it was exactly as if felt under skin, really—there were no big surprises. But I remember being so upset

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by the experience of feeling the skeleton that I had to go outside and sit down on the museum steps. I don't know to this day exactly why I was so shaken, but I suppose (all those hard things left behind) it was something like this: it was frightening to know how *real* we were!

Now I tugged at her, gently. "Who are you, then."

"Not now." And as I started to speak again she put a finger to my mouth (scent of us): "A friend." Buzzing nasal whisper, like a tuning fork, like a voice I was beginning (and this scared me, for I knew I did not know her) to love: "A friend. . . ."

At a certain point in geometrical thinking vision becomes only an obstruction. Those used to visualizing theorems (as in Euclidean geometry) reach a point, in the *n*-dimensional manifolds or elsewhere, where the concepts simply *can't* be visualized; and the attempt to do so only leads to confusion and misunderstanding. Beyond that point an interior geometry, a haptic geometry, guided by a kinetic esthetics, is probably the best sensory analogy we have; and so I have my advantage.

But in the real world, in the geometries of the heart, do I ever have any comparable advantage? Are there things we feel that can never be seen?

The central problem for everyone concerned with the relationship between geometry and the real world is the question of how one moves from the incommunicable impressions of the sensory world (vague fields of force, of danger), to the generally agreed-upon abstractions of the math (the explanation). Or, as Edmund Husserl puts it in *The Origin of Geometry* (and on this particular morning George was enunciating this passage for me with the utmost awkwardness): "How does geometrical ideality (just like that of all the sciences) proceed from its primary intrapersonal origin, where it is a structure within the conscious space of the first inventor's soul, to its ideal objectivity?"

At this point Jeremy knocked at my door: four quick raps. "Come in, Jeremy," I said, my pulse quickening.

He opened the door and looked in. "I have a pot of coffee just ready to go," he said. "Come on down and have some."

So I joined him in his office, which smelled wonderfully of strong French roast. I sat in one of the plush armchairs that circled Jeremy's desk, accepted a small glazed cup, sipped from it. Jeremy moved about the room restlessly as he chattered about one minor matter after another, obviously avoiding the topic of Mary, and all that she represented. The coffee sent a warm flush through me—even the flesh of my feet buzzed with heat, though in the blast of air-conditioned air from the ceiling vent I didn't start to sweat. At first it was a comfortable, even pleasant sen-

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sation. The bitter, murky taste of the coffee washed over my palate, through the roof of my mouth into my sinuses, from there up behind my eyes, through my brain, all the way down my throat, into my lungs: I breathed coffee, my blood singing with warmth.

. . . I had been talking about something. Jeremy's voice came from directly above and before me, and it had a crackly, tinny quality to it, as if made by an old carbon microphone: "And what would happen if the Q energy from this manifold were directed through these vectored dimensions into the macrodimensional manifold?"

Happily I babbled, "Well, provide each point P of an *n*-dimensional differentiable manifold M with the analogue of a tangent plane, an *n*-dimensional vector space Tp(M), called the tangent space at P. Now we can define a *path* in manifold M as a differentiable mapping of an open interval of R into M. And along this path we can fit the *whole* of the forces defining K the submanifold of M, a lot of energy to be sure," and I was writing it down, when the somatic effect of the drug caught up with the mental effect, and I recognized what was happening. ("Entirely too many new designer drugs these days" . . .) Jeremy's breathing snagged as he looked up to see what had stopped me; meanwhile I struggled with a slight wave of nausea, caused more by the realization that I had been drugged than by the chemicals themselves, which had very little "noise." What had I told him? And why, for God's sake, did it matter so much?

"Sorry," I muttered through the roar of the ventilator. "Bit of a headache."

"Sorry to hear that," Jeremy said, in a voice exactly like George's. "You look a little pale."

"Yes," I said, trying to conceal my anger. (Later, listening to the tape of the conversation, I thought I only sounded confused.) (And I hadn't said much about my work, either—mostly definitions.) "Sorry to run out on you, but it really is bothering me."

I stood, and for a moment I panicked; the location of the room's door—the most fundamental point of orientation, remembered without effort in every circumstance—wouldn't come to me. I was damned if I would ask Jeremy Blasingame about such a thing, or stumble about in front of him. I consciously fought to remember: desk faces door, chair faces desk, door therefore behind you. . . .

"Let me walk you to your office," Jeremy said, taking me by the arm. "Listen, maybe I can give you a lift home?"

"That's all right," I said, shrugging him off. I found the door by accident, it seemed, and left him. Down to my office, wondering if I would get the right door. My blood was hot Turkish coffee. My head spun. The key worked so I had found the right door. Locked in I went to my couch and

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laid down. I was as dizzy there as standing, but found I couldn't move again. I spun in place helplessly. I had read that the "designer drugs" used for such purposes had almost no somatic effect, but perhaps this was true only for subjects less sensitive to their kinetic reality—otherwise, why was I reacting so? Fear. Or Jeremy had put something beyond the truth drug in me. A warning? Against? Suddenly I was aware of the tight boundaries of my comprehension, beyond it the wide manifold of action I did not understand—and the latter threatened to completely flood the former, so that there would be left nothing at all that I understood about this matter. Such a prospect terrified me.

Some time later—perhaps as much as an hour—I felt I had to get home. Physically I felt much better, and it was only when I got outside in the wind that I realized that the psychological effects of the drug were still having their way with me. Rare, heavy waft of diesel exhaust, a person wearing clothes rank with old sweat: these smells overwhelmed any chance I had of locating Ramon's cart by nose. My cane felt unusually long, and the rising and falling whistles of my sonar glasses made a musical composition like something out of Messiaen's *Catalogue d'Oiseaux*. I stood entranced by the effect. Cars zoomed past with their electric whirrs, the wind made more sound that I could process. I couldn't find Ramon and decided to give up trying; it would be bad to get him mixed up in any of this anyway. Ramon was my best friend. All those hours at Warren's throwing together, and when we played beeper ping-pong at his apartment we sometimes got to laughing so hard we couldn't stand—what else is friendship than that, after all?

Distracted by thoughts such as these, and by the bizarre music of wind and traffic, I lost track of which street I was crossing. The *whoosh* of a car nearly brushing me as I stepped up from a curb. Lost! "Excuse me, is this Pennsylvania or K?" Fuckyouverymuch. Threading my way fearfully between broken bottles, punji-stick nails poking up out of boards on the sidewalk, low-hanging wires holding up tree branch or street sign, dogshit on the curb waiting like banana peel to skid me into the street under a bus, speeding cars with completely silent electric motors careening around the corner, muggers who didn't care if I was blind or paraplegic or whatever, manholes left open in the crosswalks, rabid dogs with their toothy jaws stuck out between the rails of a fence, ready to bite. . . . Oh yes, I fought off all these dangers and more, and I must have looked mad tiptoe-ing down the sidewalk, whapping my cane about like a man beating off devils.

By the time I got into my apartment I was shaking with fury. I turned on Steve Reich's *Come Out* (in which the phrase "Come out to show them" is looped countless times) as loud as I could stand it, and barged around

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my place alternately cursing and crying (that stinging of the eyes), all under the sound of the music. I formulated a hundred impossible plans of revenge against Jeremy Blasingame and his shadowy employers. I brushed my teeth for fifteen minutes to get the taste of coffee out of my mouth.

By the next morning I had a workable plan: it was time for some confrontation. It was a Saturday and I was able to work in my office without interruption. I entered the office and unlocked a briefcase, opened my file cabinet and made sounds of moving papers from briefcase to cabinet. Much more silently I got out a big mousetrap that I had bought that morning. On the back of it I wrote, *You're caught. The next trap kills.* I set the trap and placed it carefully behind the new file I had added to the cabinet. This was straight out of one of my adolescent rage fantasies, of course, but I didn't care, it was best way I could think of to both punish them and warn them from a distance. When the file was pulled from the cabinet, the trap would release onto the hand pulling the file out, and it would also break tape set in a pattern only I would be able to feel. So if the trap went off, I would know.

The first step was ready.

In Penderecki's *Threnody For the Victims of Hiroshima*, a moment of deadly stillness, strings humming dissonant strokes as the whole world waits.

Cut shaving; the smell of blood.

Across the road, a carpenter hammering nails on a roof, each set of seven strokes a crescendo: tap-tap-tap-tap-tap-tap-TAP! Tap-tap-tap-tap-tap-tap-TAP!

In that mathematics of emotion, stress calculations to measure one's tension: already there for us to use. Perhaps all of math already charts states of consciousness, moments of being.

She came to me again late at night, with the wind swirling by her through the doorway. It was late, the wind was chill and blustery, the barometer was falling. Storm coming.

"I wanted to see you," she said.

I felt a great thrill of fear, and another of pleasure, and I could not tell which was stronger, or, after a time, which was which.

"Good." We entered the kitchen, I served her water, circled her unsteadily, my voice calm as we discussed trivia in fits and starts. After many minutes of this I very firmly took her by the hand. "Come along." I led her into the pantry, up the narrow musty stairs, out the roof door into the wind. A spattering of big raindrops hit us. "Carlos—" "Never mind that!" The whoosh of the wind was accompanied by the rain smell

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of wet dust and hot asphalt, and a certain electricity in the air. Off in the distance, to the south, a low rumble of thunder shook the air.

"It's going to rain," she ventured, shouting a bit over the wind.

"Quiet," I told her, and kept her hand crushed in mine. The wind gusted through our clothes, and mixed with my anger and my fear I felt rising the electric elation that storms evoke in me. Face to the wind, hair pulled back from my scalp, I held her hand and waited: "Listen," I said, "watch, feel the storm." And after a time I felt—no, I saw, I *saw*—the sudden jerk of lightness that marked lightning. "Ah," I said aloud, counting to myself. The thunder pushed us about ten seconds later. Just a couple of miles away.

"Tell me what you see," I commanded, and heard in my own voice a vibrancy that could not be denied.

"It's—it's a thunderstorm," she replied, uncertain of me in this new mood. "The clouds are very dark, and fairly low at their bottoms, but broken up in places by some largish gaps. Kind of like immense boulders rolling overhead. The lightning—there! You noticed that?"

I had jumped. "I can see lightning," I said, grinning. "I have a basic perception of light and darkness, and everything flashes to lightness for a moment. As if the sun had turned on and then off."

"Yes. It's sort of like that, only the light is shaped in jagged white lines, extending from cloud to ground. Like that model you have of subatomic particles breaking up—a sort of broken wire sculpture, white as the sun, forking the earth for just an instant, as bright as the thunder is loud." Her voice rasped with an excitement that had sparked across our hands—also with apprehension, curiosity, I didn't know what. *Light. . . Blam*, the thunder struck us like a fist and she jumped. I laughed. "That was off to the side!" she said fearfully. "We're in the middle of it!"

I couldn't control a laugh. "More!" I shouted. "Pick up the pace!" And as if I were a weathermonger the lightning snapped away the darkness around us, *flash*-BLAM . . . *flash*-BLAM . . . *flash*-**BLAM**!!

"We should get down!" Mary shouted over the wind's ripping, over the reverberating crashes of thunder. I shook my head back and forth and back and forth, gripped her by the arm so hard it must have hurt.

"*No!* This is *my* visual world, do you understand? This is as beautiful as it ever—" *flash-crack*-BLAM.

"*Carlos*—"

"No! Shut up!" *Flash-flash-flash*-**BOOM**! Rolling thunder, now, hollow casks the size of mountains, rolling across a concrete floor.

"I'm afraid," she said miserably, tugging away from me.

"You feel the exposure, eh?" I shouted at her, as lightning flashed and the wind tore at us, and raindrops pummeled the roof, throwing up a

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tarry smell to mix with the lightning's ozone. "You feel what it's like to stand helpless before a power that can kill you, is that right?"

Between thunderclaps she said, desperately, "Yes!"

"Now you know how I've felt around you people!" I shouted. BLAM! BLAM!! "God damn it," I said, pain searing my voice as the lightning seared the air, "I can go sit in the corner park with the drug dealers and the bums and the crazies and I *know* I'll be safe, because even those people still have the idea that it isn't right to hurt a blind man. But you people!" I couldn't go on. I shoved her away from me and staggered back, remembering it all. *Flash*-BLAM! *Flash*-BLAM!

"—Carlos—" Hands pulling me around.

"What."

"I didn't—"

"The hell you didn't! You came in and gave me that story about the moon, and talked backwards, and drew stuff, and all to steal my work—how could you do it? How could you do it?"

"I *didn't*, Carlos, I didn't!" I batted her hands away, but it was as if a dam had burst, as if only now, charged to it in the storm, was she able to speak: "*Listen to me*!" *Flash*-BLAM. "*I'm just like you*. They made me do it. They took me because I have some math background, I guess, and they ran me through more memory implants that I can even count!" Now the charged buzzing timbre of her desperate voice scraped directly across my nervous system: "You know what they can do with those drugs and implants. They can program you just like a machine. You walk through your paces and watch yourself and can't do a thing about it." BLAM. "And they programmed me and I went in there and spouted it all off to you on cue. But you *know*" BLAM "was trying, you know there's the parts of the mind they can't touch—I fought them as hard as I could, don't you see?"

Flash-BLAM. Sizzle of scorched air, ozone, ringing eardrums. That one was close.

"I took TNPP-50," she said, calmer now. "That and MDMA. I just *made* myself duck into a pharmacy on my way to meet you alone, and I used a blank prescription pad I keep, and got them. I was so drugged up when we went to the Tidal Basin that I could barely walk. But it helped me to speak, helped me to fight the programming."

"You were drugged?" I said, amazed. (I know—Max Carrados would have figured it out. But me—)

"Yes!" BOOM. "Every time I saw you after that time. And it's worked better every time. But I've had to pretend I was still working on you, to protect us both. The last time we were up here "BOOM" you *know* I'm with you, Carlos, do you think I would have faked that?"

Bassoon voice, hoarse with pain. Low rumble of thunder, in the dis-

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tance. Flickers in the darkness, no longer as distinct as before: my moments of vision were coming to an end. "But what do they *want*?" I cried.

"Blasingame thinks your work will solve the problems they're having getting sufficient power into a very small particle beam weapon. They think they can channel energy out of the microdimensions you've been studying." *Blam.* "Or so I guess, from what I've overheard."

"Those fools." Although to an extent there might be something to the idea. I had almost guessed it, in fact. So much energy. . . . "Blasingame is such a *fool*. He and his stupid Pentagon bosses—"

"*Pentagon*!" Mary exclaimed. "Carlos, these people are *not* with the Pentagon! I don't know who they are—a private group, from West Germany, I think. But they kidnapped me right out of my apartment, and I'm a statistician for the Defense Department! The Pentagon has nothing to do with it!"

Blam. "But Jeremy . . ." My stomach was falling.

"I don't know how he got into it. But whoever they are, they're dangerous. I've been afraid they'll kill us both. I know they've discussed killing you, I've heard them. They think you're on to them. Ever since the Tidal Basin I've been injecting myself with Fifty and MDMA, a lot of it, and telling them you don't know a thing, that you just haven't *got* the formula yet. But if they were to find out you know about them. . . ."

"God I hate this spy shit," I exclaimed bitterly. And the oh-so-clever trap in my office, warning Jeremy off. . . .

It started to rain hard. I let Mary lead me down into my apartment. No time to lose, I thought. I had to get to my office and remove the trap. But I didn't want her at risk, I was suddenly frightened more for this newly revealed ally than for myself—

"Listen, Mary," I said when we were inside. Then I remembered, and whispered in her ear, "Is this room bugged?"

"No."

"For God's sake"—all those silences—she must have thought me deranged! "All right. I want to make some calls, and I'm sure my phones are bugged. I'm going to go out for a bit, but I want you to stay right here. All right?" She started to protest and I stopped her. "Please! *Stay right here.* I'll be right back. Just stay here and wait for me, *please.*"

"Okay, okay. I'll stay."

"You promise?"

"I promise."

Down on the street I turned left and took off for my offices. Rain struck my face and I automatically thought to return for an umbrella, then angrily shook the thought away. Thunder still rumbled overhead from time to time, but the brilliant ("brilliant!" I say—meaning I saw a certain

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lightness in the midst of a certain darkness) the brilliant flashes that had given me a momentary taste of vision were gone.

Repeatedly I cursed myself, my stupidity, my presumption. I had made axioms out of theorems (humanity's most common logical-syntactic flaw?), never pausing to consider that my whole edifice of subsequent reasoning rested on them. And now, having presumed to challenge a force I didn't understand, I was in real danger, no doubt about it; and no doubt (as corollary) Mary was as well. The more I thought of it the more frightened I became, until finally I was as scared as I should have been all along.

The rain shifted to an irregular drizzle. The air was cooled, the wind had dropped to an occasional gust. Cars hissed by over wet 21st Street, humming like Mary's voice, and everywhere water sounded, squishing and splashing and dripping. I passed 21st and K, where Ramon sometimes set up his cart; I was glad that he wouldn't be there, that I wouldn't have to walk by him in silence, perhaps ignoring his cheerful invitation to buy, or even his specific hello. I would have hated to fool him so. Yet if I had wanted to, how easy it would have been! Just walk on by—he would have had no way of knowing.

A sickening sensation of my disability swept over me, all the small frustrations and occasional hard-learned limits of my entire life balling up and washing through me in a great wave of fear and apprehension, like the flash-Boom of the lightning and thunder, the drenching of the downpour: where was I, where was I going, how could I take even one step more?

This fear paralyzed me. I felt as though I had never come down from the drugs Jeremy had given me, as though I struggled under their hallucinatory influence still. I literally had to stop walking, had to lean on my cane.

And so I heard their footsteps. Henry Cowell's *The Banshee* begins with fingernails scraping repeatedly up the high wires of an open piano; the same music played my nervous system. Behind me three or four sets of footsteps had come to a halt, just a moment after I myself had stopped.

For a while my heart hammered so hard within me that I could hear nothing else. I forced it to slow, took a deep breath. Of course I was being followed. It made perfect sense. And ahead, at my office. . . .

I started walking again. The rain picked up on a gust of wind, and silently I cursed it; it is difficult to hear well when rain is pattering down everywhere, so that one stands at the center of a universal *puh-puh-puh-puh*. But attuned now to their presence, I could hear them behind me, three or four (likely three) people walking, walking at just my pace.

Detour time. Instead of continuing down 21st Street I decided to go west on Pennsylvania, and see what they did. No sound of nearby cars

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as I stood still; I crossed swiftly, nearly losing my cane as it struck the curb. As casually, as "accidentally" as I could, I turned and faced the street; the sonar glasses whistled up at me, and I knew people were approaching though I could not hear their footsteps in the rain. More fervently than ever before I blessed the glasses, turned and struck off again, hurrying as much as seemed natural.

Wind and rain, the electric hum and tire hiss of a passing car. Washington late on a stormy spring night, unusually quiet and empty. Behind me the wet footsteps were audible again. I forced myself to keep a steady pace, to avoid giving away the fact that I was aware of their presence. Just a late night stroll to the office. . . .

At 22nd I turned south again. Ordinarily no one would have backtracked on Pennsylvania like that, but these people followed me. Now we approached the university hospital, and there was a bit more activity, people passing to left and right, voices across the street discussing a movie, an umbrella being shaken out and folded, cars passing . . . still the footsteps were back there, farther away now, almost out of earshot.

As I approached Gelman Library my pulse picked up again, my mind raced through a network of plans, all unsatisfactory in different ways. . . . Outdoors I couldn't evade pursuit. Given. In the building—

My sonar whistled up as Gelman loomed over me, and I hurried down the steps from the sidewalk to the foyer containing the elevator to the sixth and seventh floors. I missed the door and adrenaline flooded me, then there it was just to my left. The footsteps behind me hurried down the sidewalk steps as I slipped inside and stepped left into the single elevator, punched the button for the seventh floor. The doors stood open, waiting . . . then mercifully they slid together, and I was off alone.

A curious feature of Gelman Library is that there are no stairways to the sixth and seventh floors (the offices above the library proper) that are not fire escapes, locked on the outside. To get to the offices you are forced to take the single elevator, a fact I had complained about many times before—I liked to walk. Now I was thankful, as the arrangement would give me some time. When the elevator opened at the seventh floor I stepped out, reached back in and punched the buttons for all seven floors, then ran for my office, jangling through my keys for the right one.

I couldn't find the key.

I slowed down. Went through them one by one. Found the key, opened my door, propped it wide with the stopper at its base. Over to the file cabinet, where I opened the middle drawer and very carefully slid one hand down the side of the correct file.

The mousetrap was gone. They knew that I knew.

I don't know how long I stood there thinking; it couldn't have been long, though my thoughts spun madly through scores of plans. Then I

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went to my desk and got the scissors from the top drawer. I followed the power cord of the desk computer to its wall socket beside the file cabinet. I pulled out the plugs there, opened the scissors wide, fitted one point into a socket, jammed it in and twisted it hard

Crack. The current held me cramped down for a moment—intense pain pulsed through me—I was knocked away, found myself on my knees slumping against the file cabinets.

(For a while, when I was young, I fancied I was allergic to novocaine, and my dentist drilled my teeth without anesthetic. It was horribly uncomfortable, but tangent to normal pain: pain beyond pain. So it was with the shock that coursed through me. Later I asked my brother, who is an electrician, about it, and he said that the nervous system was indeed capable of feeling the sixty cycles per second of the alternating current: "When you get bit you always feel it pumping like that, very fast but distinct." He also said that with my wet shoes I could have been killed. "The current cramps the muscles down so that you're latched onto the source, and that can kill you. You were lucky. Did you find blisters on the bottoms of your feet?" I had.)

Now I struggled up, with my left arm aching fiercely and a loud hum in my ear. I went to my desk. As they beeped fairly loudly, I took my glasses off and put them on a bookshelf facing the door. I tested the radio—it had no power. Wondering if the whole floor was dead, I went into the hall briefly to look into a ceiling light. Nothing. Back at the desk I took stapler and water tumbler, put them beside the file cabinet. Went to the book shelves and gathered all the plastic polyhedral shapes (the sphere was just like a big cue ball), and took them to the file cabinet as well. Then I found the scissors on the floor—

Out in the hall the elevator doors opened. "It's dark—" "Shh." Hesitant steps, into the hall. I tiptoed to the doorway. Here it was possible to tell for sure that there were only three of them. There would be light from the elevator, I recalled: it wouldn't do to be illuminated. I stepped back.

(Once Max Carrados was caught in a situation similar to mine, and he simply announced to his assailants that he had a gun on them, and would shoot the first person to move. In his case it had worked; but now I saw that the plan was insanely risky. . . .)

"Down here," one whispered. "Spread out, and be quiet." Rustling, quiet footsteps, three small clicks (gun safeties?). I retreated into the office, behind the side of the file cabinet. Stilled my breathing, and was silent in a way they'd never be able to achieve. If they heard anything it would be my glasses. . . .

"It's here," the first voice whispered. "Door's open, watch it." Their breathing was quick. They were bunched up outside the door, and one said "Hey, I've got a lighter," so I threw the pulled-open scissors overhand.

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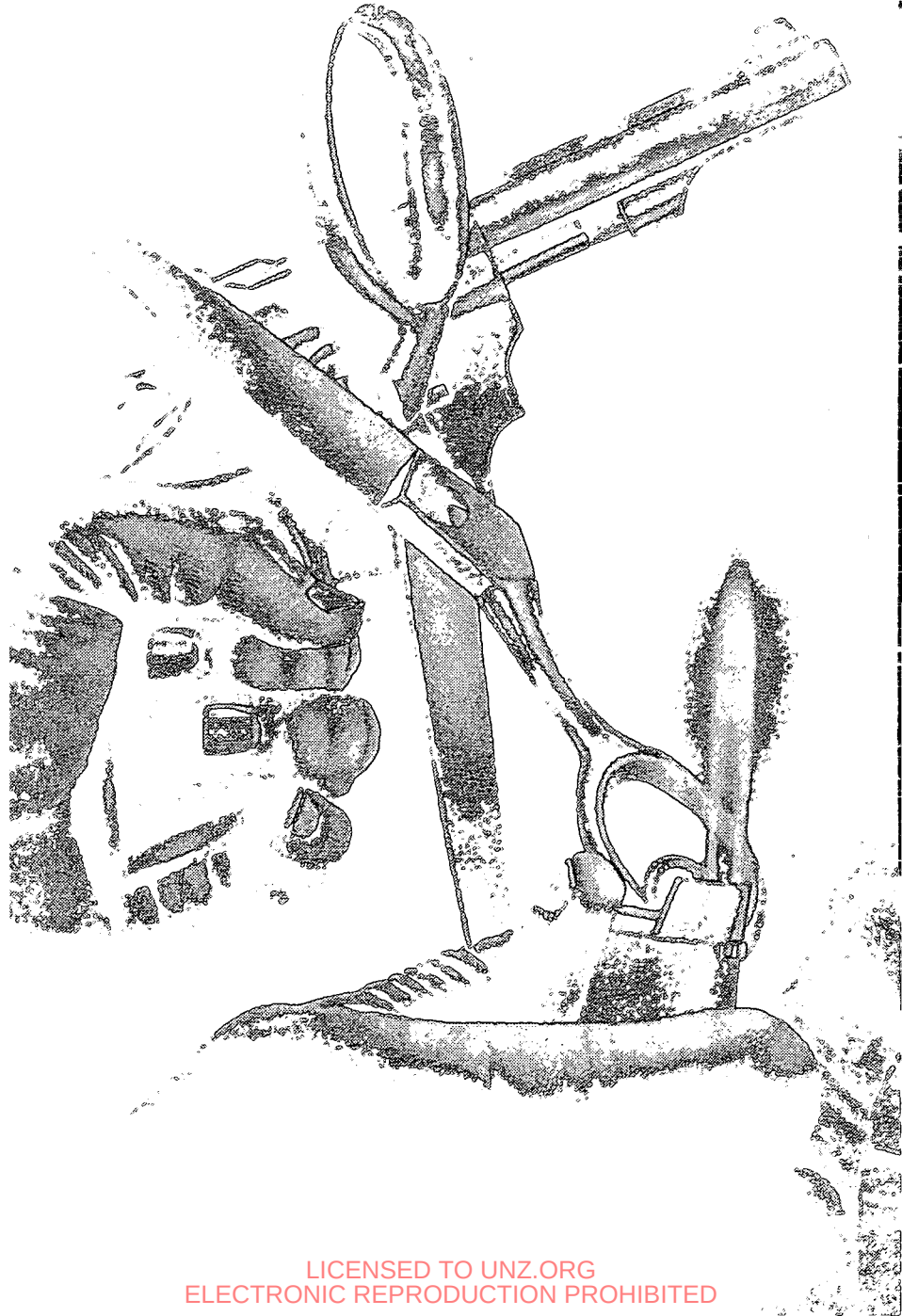

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"*Ah*! Ah—" Clatter, hard bump against the hall wall, voices clashing, "What" "threw a knife" "ah"—

I threw the stapler as hard as I could, *wham*—the wall above, I guessed, and threw the dodecahedron as they leaped back. I don't know what I hit. I jumped almost to the doorway, and heard a voice whisper "Hey." I threw the cue-ball sphere right at the voice. *Ponk*. It sounded like—like nothing else I have ever heard. (Although every once in a while some outfielder takes a beepball in the head, and it sounded something like that, wooden and hollow). The victim fell right to the hall floor, making a heavy sound like a car door closing; a metallic clatter marked his gun skidding across the floor. Then CRACK! CRACK! CRACK! another of them shot into the office. I cowered on the floor and crawled swiftly back to the file cabinet, ears ringing painfully, hearing wiped out, fear filling me like the smell of cordite leaking into the room. No way of telling what they were doing. The floor was carpet on concrete, with no vibrations to speak of. I hung my mouth open, trying to focus my hearing on the sound of my glasses. They would whistle up if people entered the room quickly, perhaps (again) more loudly than the people would be on their own. The glasses were still emitting their little beep, now heard through the pulsing wash of noise the gunshots had set off in my ears.

I hefted the water tumbler—it was a fat glass cylinder, with a heavy bottom. A rising whistle—and then, in the hall, the rasp of a lighter flint being sparked—

I threw the tumbler. *Crash*, tinkle of glass falling. A man entered the office. I picked up the pentahedron and threw it—thump of it against far wall. I couldn't find any of the other polyhedrons—somehow they weren't there beside the cabinet. I crouched and pulled off a shoe—

He swept my glasses aside and I threw the shoe. I think it hit him, but nothing happened. There I was, without a weapon, utterly vulnerable, revealed in the glow of a damned cigarette lighter. . . .

When the shots came I thought they had missed, or that I was hit and couldn't feel it; then I realized some shots had come from the doorway, others from the bookcase. Sounds of bodies hit, staggering, falling, writhing—and all the while I cowered in my corner, trembling.

Then I heard a nasal groan from the hall, a groan like a viola bowed by a rasp. "Mary," I cried, and ran into the hallway to her, tripped on her. She was sitting against the wall—"Mary!" Blood on her—"Carlos," she squeaked painfully, sounding surprised.

Fortunately, it turned out that she had only been wounded; the bullet had entered just under the shoulder, wrecking it but doing no fatal damage.

I learned all this later, at the hospital. An hour or more after our

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arrival a doctor came out and told me, and the sickening knot of tension in my diaphragm untied all at once, making me feel sick in another way, dizzy and nauseous with relief, unbelievably intense relief.

After that I went through a session with the police, and Mary talked a lot with her employers, and after that we both answered a lot of questions from the FBI. (In fact, that process took days.) Two of our assailants were dead (one shot, another hit in the temple with a sphere) and the third had been stabbed: what had happened? I stayed up all through that first night explaining, retrieving and playing my tapes, and so on, and still they didn't go for Jeremy until dawn; by that time he was nowhere to be found.

Eventually I got a moment alone with Mary, about ten the following morning.

"You didn't stay at my place," I said.

"No. I thought you were headed for Blasingame's apartment, and I drove there, but it was empty. So I drove to your office and came upstairs. The elevator opened just as shots were being fired, so I hit the deck and crawled right over a gun. But then I had a hell of a time figuring out who was where. I don't know how you do it."

"Ah."

"So I broke my promise."

"I'm glad."

"Me too."

Our hands found each other and embraced, and I leaned forward until my forehead touched her shoulder (the good one), and rested.

A couple of days later I said to her, "But what were all those diagrams of Desargues' Theorem about?"

She laughed, and the rich timbre of it cut through me like a miniature of the current from my wall socket. "Well, they programmed me with all those geometrical questions for you, and I was roboting through all that, you know, and struggling underneath it all to understand what was going on, what they wanted. And later, how I could alert you. And to tell you the truth, Desargues' Theorem was the only geometry of my own that I could remember from school. I'm a statistician, you know, most of my training is in that and analysis. . . . So I kept drawing it to try to get your attention to *me*. I had a mesage in it, you see. You were the triangle in the first plane, and I was the triangle in the second plane, but we were both controlled by the point of projection—"

"But I knew that already!" I exclaimed.

"Did you? But also I marked a little *J* with my thumbnail by the point of projection, so you would know Jeremy was doing it. Did you feel that?"

"No. I Xeroxed your drawings, and an impression like that wouldn't

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show up." So my indented copy, ironically enough, had misssed the crucial indentation. . . .

"I know, but I was hoping you would brush it or something. Stupid. Well, anyway, between us all we were making the three collinear points off to the side, which is what they were after, you see, determined in this case by point *J* and his projection. . . ."

I laughed. "It never occurred to me," I said, and laughed again, "but I sure do like your way of thinking!"

I saw, however, that the diagram had a clearer symbolism than that.

When I told Ramon about it, he laughed too. "Here you are the mathematician and you never got it! It was too simple for you!"

"I don't know if I'd call it *too simple*—"

"And wait—wait—you say you told this here girlfriend of yours to stay behind at your house, when you knew you were going to run into those thugs at your office?"

"Well, I didn't *know* they'd be there right then. But . . ."

"Now *that* was superblink."

"Yeah." I had to admit it; I had been stupid, I had gone too far. And it occurred to me then that in the realm of thought, of analysis and planning, I had consistently and spectacularly failed. —Whereas in the physical continuum of action, I had (up to a point) (a point that I didn't like to remember [*ponk* of sphere breaking skull, cowering revealed in a lighter's glare]) done pretty well. Though it was disturbing, in the end this reflection pleased me. For a while there, anyway, I had been almost free of the world of texts.

Naturally it took a while for Mary to regain her health; the kidnapping, the behavior programming, the shooting, and most of all the repeated druggings her captors and she had subjected herself to, had left her quite sick, and she was in the hospital for some weeks. I visited every day; we talked for hours.

And naturally, it took quite a while for us to sort things out. Not only with the authorities, but with each other. What was real and permanent between us, and what was a product of the strange circumstances of our meeting—no one could say for sure which was which, there.

And maybe we never did disentangle those strands. The start of a relationship remains a part of it forever; and in our case, we had seen things in each other that we might never have otherwise, to our own great good. I know that years later, sometimes, when her hand touched mine I would feel that primal thrill of fear and exhilaration that her first touches had caused in me, and I would shiver again under the mysterious

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impact of the unknown other. . . . And sometimes, arm in arm, the feeling floods me that we are teamed together, in an immense storm of trouble and threat that cracks and thunders all around us. So that it seems clear to me, now, that loves forged in the smithy of intense and dangerous circumstances are surely the strongest loves of all.

I leave the proof of this as an exercise for the reader. ●

NEXT ISSUE:

Nebula-and-Hugo winner **Robert Silverberg** returns to these pages next month with our September cover story, "The Secret Sharer." The *Sword of Orion* is an immense, miles-long starship, existing partially in our space and partially in hyperdimensional space, on its way to the distant world of Cul-De-Sac with a cargo of climate nodes, bone banks, communication bubbles, artificial intelligences, skin-and-organ synthesizers, gene replacement kits, and a load of seven thousand sleeping colonists, frozen in cryogenic storage. The *Sword of Orion* is young Captain Adam's first command, and the responsibility weighs heavily on him... but things *can* get worse, for soon, alone in the vastness of interstellar space, he finds that he also has to contend with a bizarre and dangerous kind of stowaway as well... "The Secret Sharer" is sure to be one of the year's most prominent novellas; don't miss it. Hugo-and-Nebula winner **Orson Scott Card** is also on hand for September, and from the far future he takes us back to the early frontier days of 1800's Ohio for a look at two alien cultures in conflict, in the gripping "Carthage City," a novella set in the same milieu as last year's popular "Hatrack River."

Also in September: recent Nebula-winner **Nancy Kress** returns for a look at the consequences of Knowing Too Much, in the sleek and stylish "Glass"; new writer **Tom Maddox** makes his *IAsfm* debut with a fast-paced tale of romance and high-tech intrigue, in "Spirit of the Night"; new writer **Brad Ferguson** makes *his* debut in *IAsfm* with an evocative sideways look at "The World Next Door," an alternate reality where 1962's Cuban Missile Crisis took an even-more ominous turn; and **Andrew Weiner** returns with "The Alien in the Lake," a wry examination of the sociological and interpersonal consequences of a series of Very Close Encounters. Plus an array of columns and features. Look for the September issue on your newsstands on July 28, 1987.

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ON BOOKS

by Baird Searles

Another River To Cross

Northshore
By Sheri S. Tepper
Tor, $14.95

Get out the oars, men. Here's another world dominated by a huge river. In Sheri S. Tepper's *Northshore*, the stream is reportedly many hundreds of miles wide, and goes completely around the globe. The boatmen-traders who ply the river make a circuit every seven years, always east-to-west since moving east is forbidden, by boat as well as on land. "Land" consists only of the north shore, since the other side is completely unknown save for vague rumor.

All this seems something of a fantasy, but Tepper gives a nebulous science-fictional background to it. Humans, a teeming population of which inhabits Northshore, have only been on the planet a millennium or so. They are ruled by a "Protector of Man" from his stronghold in the North through a complicated and rather ruthless theology. The gods rule that every town will deliver its dead to the community west of it, where, in the bone pits, the Holy Sorters pick the good from the bad; the good go to a sort of heaven, the bad are raised in a zombie-like living death to be Workers, controlled by a sort of priestly caste called the Awakeners.

There *is* an intelligent race native to the planet, bird-like creatures called the Thraish who are aloof and almost mythical to most of the resident humans. The Thraish have a culture of their own, totally alien to that of the humans.

This is a pretty complex world Tepper has dreamed up; I haven't even mentioned the black nomadic humans who live on the northern steppes, preyed on by the military who serve the Protector of Man, or the offshoot, flightless species of Thraish who live on an island in the river. And there's a complex chemistry to this world: the Blight that comes from the river and turns living beings to wood; the elixir made from the Thraish that gives immortality to the Protector and his council.

The plot consists of a mosaic of human characters—a boatman, a young female Awakener, a nomad Princess—as they gradually discover that their religion is a fraud. It is the result of a long-ago treaty between the humans and the Thraish, and is primarily built on the rather nasty eating habits of the carnivorous aliens.

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Tepper is a smooth writer with a special talent for the bizarre detail (one might also call it Peakeish, but that might be meaningless in a country so benighted as to not keep Mervyn Peake in print). As noted, the world and its culture and peoples are complex and imaginative. Why, then, did I have the feeling I'd read it all before? Perhaps as more and more writers struggle to create worlds, the strain of being original—the artifice of creation, as it were—is showing more and more. I found many details of Tepper's riverworld diverting, but I didn't really believe it; it *and* its characters didn't come alive.

And, of course, this is only Vol. 1 of *Northshore*—sigh. And this one doesn't even have the grace to break off at a demi-climax, but simply leaves its characters at a moment of crisis, just as the population picks up its shovels and hoes (or whatever) to start the revolution. I'm afraid it will finish without me.

Once More With Feeling

Replay
By Ken Grimwood
Arbor House, $17.95

Now here's a fantasy whose idea is not new—it is one that has occurred to almost every one of us, I betcha—but the realization of which is so smartly done that I really *did* feel like I was reading something totally original.

Who has not fantasized as to what it would be like to live one's life over again from a certain point, with the knowledge gained from the first go-round? I would guess that to be one of the most popular daydreams of humanity, and it seems an ideal concept for a novel. Yet there are intrinsic problems. For the variation to make sense, for instance, it would seem that the theme would have to be stated, which means a realistic novel for half its length, then the fantasy "rewind," then the variant replay. Tricky.

(It might be noted that the much overrated movie, *It's A Wonderful Life*, plays with this idea in a negative fashion, i.e. the total absence of the protagonist in the variation.)

Ken Grimwood, in *Replay*, has thought through the problems and come up with some dandy answers. His hero, Jeff Winston, is not an unusual person—he's forty-three, has an unhappy marriage, is stuck in a nowhere job. Instead of taking us through the dreary scenario of how he got there, Grimwood starts with the rewind—Winston suffers what seems to be a heart attack in 1988, and comes to as his youthful collegiate self of 1963. We get the theme as Winston's memories of the (first) reality, as he lives through the variation of the second. And he does the expected—"remembering" at least the major sports victories of the period, he parlays his small assets into a tidy sum which he then invests in sure things like IBM and Polaroid, and achieves the astonishing success any moderately sensible person would under the circumstances.

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Though satisfying, even that wouldn't exactly make an intriguing story. But then the author pulls his best gimmick. Comes 1988, and Winston's forty-third year—POW—back to 1963, perforce leaving behind his beloved daughter (who had not existed in his "first" life).

Now his psychology is entirely different—so much for achievement, or loving, if this is going to keep happening. So the third time around is yet *another* story.

And with yet another surprise from the author. Along about 1974, a hit movie appears that Winston has never heard of, and with which he has had nothing to do, which means that there's another joker in the deck. Someone else is replaying.

Her name is Pamela. Her replay times are just about the same as those of Winston, though each, as they think about it, have come back just a bit later in 1963 each time, and the cycle doesn't quite match. The story follows the complicated relationship between Winston and Pamela through several lifetimes. Because of the mismatched cycles, Jeff has to wait progressively longer for Pamela to return, and there are enormous complications. (She is only fourteen when she begins to replay—how does a twenty-year-old male justify a relationship with a proper fourteen-year-old girl in 1963?) They live through several more lives, each with the same background events—the Kennedy assassination, Vietnam, Watergate, the shuttle disaster. In one replay, they go public and alter the course of history when the CIA picks their brains and changes U.S. policy. In another, they try to find other replayers, with horrifying results.

Grimwood manages this whole complex story with great pizzazz; what is happening when is always clear, and even better, his characters react intelligently—there's not a false or melodramatic note in the whole thing.

This is hardly your currently fashionable fantasy—no cute magicians, wise ol' dragons, tricksy pixies. It's a fantasy using the reality of our times and our lives (though, thank God, not preaching a moral, like the icky film mentioned above). This may be why it was such a pleasure to read, and why, despite the absolute commonality of the idea, it seemed so fresh. (*And* what a mini-series it would make. Cheap to produce, too . . .)

Roman A Clef

The Misplaced Legion

By Harry Turtledove

Del Rey, $2.95

I know, I know. It's getting to be a bore, remarking in every column that here is yet *another* in the flood of historical fantasies. But it continues to amaze me—I can't think when I've seen a trend gather so much steam so fast. It was only about three years ago when the harbingers appeared, and now not a month goes by without one or

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more from authors major *and* minor.

This month's entry is *The Misplaced Legion* by Harry Turtledove, who, according to the biographical material in the book, is a historian as well as a writer. In this novel, which is (groan) "Book One of the Videssos Cycle," the historian takes pride of place over the writer.

In it, a legion involved in Caesar's conquest of Gaul tangles with a Celtic tribe. As they're about to be defeated, the two leaders join in single combat. Both, it seems, have magical swords (the Roman tribune, Marcus Scaurus, had captured his in battle), and when they cross—zap, the several hundred Romans plus the Celtic leader are transported to another world. Though the stars are different, it is remarkably (and rather boringly) Earthlike.

The legion, which is, of course, an efficient fighting machine, is almost immediately hired by the Empire of Videssos, which employs a lot of mercenaries. Videssos is almost indistinguishable from the historical Byzantine Empire— Videssan names sound Greek, the state religion is very like the disputatious Greek orthodoxy of the Byzantines, the description of the major city is strikingly similar to Constantinople, and it even lies on a strait called "the Cattle-Crossing" (as in Bosporus). It comes as no surprise to find that Turtledove took his degree in Byzantine history.

The Empire's enemy, to the east, is an unpleasant bunch of heathens who employ magic, and the Empire itself has a small group of academic "magicians." But use of magic is only a minute segment of the story (in addition to the original Druidical zap), and the fantasy elements are minimal. In general the novel has the quality of being about some Romans of Caesar's time temporarily misplaced a thousand years ahead, rather than into some place really exotic. There's a bit of fun in Marcus and his Romans finding their place in the unfamiliar society's Byzantine politics, but there's not enough contrast between the two sides for even that to be very problematical. One wishes that the author had exercised a little more imagination.

If you do want to continue the adventures of Marcus and Co(horts), *An Emperor For the Legion,* Book Two, should be out by the time this sees print.

Time—Again

About Time

By Jack Finney

Simon & Schuster, $7.95 (paper)

Considering how popular two of Jack Finney's works are (*Time and Again* and *Invasion of the Body Snatchers*), there's very little by him available, so a new collection, even of old stories, is welcome. The twelve stories in *About Time* are indeed mostly about time, and date (I'd guess from internal evidence) from the 1950s. But they all have the special quality that has made

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particularly *Time and Again* so enduringly endearing.

Finney is not really a science fiction writer. He takes science fictional ideas, and weaves them into gentle stories, reminiscent of Bradbury, if a comparison must be made. But they are more straightforward than Bradbury's work. In any case, don't expect anything flashy or tricky; Finney's primary purpose in playing with time is to cater to a nostalgia for the comparatively recent past—mostly turn-of-the-century America.

A couple of the stories are about Galesberg, Illinois, a classic example of an American small town straight out of Thornton Wilder. Galesberg, however, is fighting modernization—high rises, parking lots, and such like. No, not the *people* of Galesberg—the town itself. It does so in various intriguing ways, such as throwing a real estate developer into the past and having him arrested as drunk and disorderly for trying to flag a long-vanished streetcar, or running down the guy who's about to chop down some ancient elms—with a 1916 Buick.

Sometimes Finney plays in the other direction—there are the couple who are "Such Interesting Neighbors." They seem to know a lot about the future, including the fact that it's so rotten that when time travel was invented and marketed, most of the population fled to the past. In "I'm Scared," the desire for the past is the catalyst; a man collects anecdotes about little quirks of time displacement (including a dog story that will tear your heart out). As the number and seriousness of them mounts, he does indeed become frightened, and theorizes that the longing for the past is seriously disturbing the present.

And writers who have a case against critics will love the final "Hey, Look At Me!" in which a dead writer visits a neat revenge on a critic—so gently that even a critic can't take offense.

Snoo Flake

Spaceache
By Snoo Wilson
Ballantine, $3.50 (paper)

I have a built-in prejudice against those novels written by persons whose Christian name is Snoo. It's irrational and unfair, I know, but I get all twitchy when that name pops up. In the case of Snoo Wilson's *Spaceache* it's justified.

It takes place in one of those near futures with *no* redeeming social values and everything including the persistent sex and violence is unpleasant. These used to be written as cautionary tales of the "if-this-goes-on" variety; nowadays I have the uneasy feeling they're being published because it's what a large portion of the public wants. (And boy, do they deserve the future they're gonna get.)

Heroine (?) Chrissie has a boy friend who is "an ignorant glue-sniffing alcoholic sixteen-year-old with glue sores around his mouth and lice around his erection." To

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get away from him, she has herself shot into space (an option open to all Proles to relieve population) to be stored in a sort of metal milk bottle (after being subjected to matter reduction and quick freezing) for a million years.

Something goes awry (along with the plot) and Chrissie comes out of her bottle as the transport ship goes into another universe—just as unpleasant as the old one—and she and the flakey crew land on Neptune, which seems to be refighting World War II . . . Get the picture? Need I go on?

It's all so hip, kinky, and clever that you can't stand it. I couldn't, in any case. *Spaceache* gave me an ache in my snoo.

Reasonable Unreason

Land of Unreason

By L. Sprague de Camp & Fletcher Pratt

Baen, $2.95 (paper)

Way back, in the youth of the world, this magazine, and myself, the first book which I wrote about in this column was a reprint of de Camp and Pratt's classic *Land of Unreason*. (No, not the first edition—it wasn't *that* long ago.) Like all good reprints, it rapidly went out of print again, and remained so for some time. An edition appeared in trade paperback last year; now it's available again in mass market size, and with the reader's kind permission, I will paraphrase that long-ago review. (If it had been written in the days of save-to-disc, you'd have gotten it *un*paraphrased.)

L. Sprague de Camp and Fletcher Pratt each had his own *persona* as a writer: Pratt wrote the pioneering fantasy, *The Well of the Unicorn*, de Camp any number of Golden Age SF and fantasy classics. Combined, they created yet a third writer with another quality, best exemplified by the immortal stories about Harold Shea, the *Incomplete Enchanter*. With a nod to the Brits, Dunsany and Nesbit, they can be said to have invented the light fantasy so pervasive today (though Fritz Leiber, their fellow writer in Campbell's *Unknown*, might have an equal claim).

Land of Unreason has a hero almost as blundering as Shea. He is a diplomat recuperating at a Yorkshire farmhouse during WW II. The story begins on St. John's Eve, and the farmer's wife puts out a bowl of milk for the Good Folk. Our hero, Fred, feeling an urge for some milk, steals what's in the bowl and substitutes Scotch. The ensuing befuddlement of spirits (of both kinds) results in his being carried off as a changeling, and he wakes in the court of Oberon in Fairyland.

The place is a madhouse. Titania and Oberon are having their usual tiffs about who gets which mortal. Worse than that, everybody's magic is going awry; even the unnatural laws of Fairyland are becoming inconsistent.

This whacko situation makes for some funny moments, but the novel gets deeper and darker as Fred

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goes on a mission for Oberon to the Kobolds, and it seems eventually that he himself is the key to the whole situation. There is a surprise ending that really comes off, though the sharp reader will have picked up a clue very early along.

There are moments of satire here which recall T. H. White's cautionary animal societies from *The Once and Future King* and moments of great sweetness, as when Fred is tranformed into a frog and in his pond meets a sharp-tongued lady vole with a heart of gold. For the most part, there is a quality of Alice-type surrealism, particularly when the inhabitants of Fairyland get going on logic-chopping and semantics. But the logic of this novel is illogic, the reason for it unreason; somehow it all hangs triumphantly together nonetheless.

Shoptalk

As noted before, there's a sincere effort on the part of this column to keep you readers abreast of the unending complications of series publications and *re*publications and all the other complications which publishers bring to our simple lives. This month, a really complex situation, so pay attention: there may be a test. About a decade ago, Susan Cooper wrote a fine series of fantasies, of that variety which were published as juveniles, but which transcended that category (in an odd way) and became something of a cult classic. I say odd way because of the rather curious form of the series, which would be described in music or poetry as A, B, A, B, AB. There are five books: numbers 1 and 3 concern one set of characters and would, by themselves, simply be considered excellent juvenile fantasies if it weren't for the overtones provided by numbers 2 and 4, which are about another bunch of people entirely, and have an entirely different tone, beautiful and surprisingly serious. The two "sets" are connected by only the most tenuous of linkages. The whole kit and caboodle come together for the series climax in number 5.

The titles are: 1) *Over Sea, Under Stone*, 2) *The Dark Is Rising*, 3) *Greenwitch*, 4) *The Grey King*, and 5) *Silver On the Tree*. The whole thing is known as "The Dark Is Rising Sequence," obviously from the second book. Now the problem is that the first book was published by one publisher, the others by another. That original publisher, for whatever peculiar reasons, has never given up rights to *Over Sea, Under Stone*, though it has, so far as I know, kept it in print. The others have just become available in regular paperback for the first time—and a good thing, too (Collier, $2.95 each)—but you may have to do some searching for the first one, which (again, so far as I know) is available as a trade (oversized) paperback (Harcourt, Brace).

Sorry for all the space that had to be wasted to explain publishers' vagaries, but in this case these books are worth it . . . oh, yes, what are they about? Briefly, the powers

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of Darkness are indeed rising again in the world, and some contemporary people in modern Wales and Cornwall are enlisted by the Light to find ancient artifacts and powers to combat them. Merlin is a character, but bear in mind that this was written before he, poor old chap, had become a cliché.

Speaking of Arthur and that crowd, maybe the best of the totally realistic Arthurian books has been republished after a long time out of print. It's Rosemary Sutcliff's *Sword At Sunset*. Viewing Arthur as a British war chief in post-Roman Britain, it has no fantasy elements, but is fascinating as a conjecture into the factual basis for the legends (Tor, $4.50, paper).

Recent publications from those associated with this magazine include: *Norby: Robot For Hire* by Janet and Isaac Asimov (Ace, $2.95, paper).

Books to be considered for review in this column should be submitted to Baird Searles, % The Science Fiction Shop, 58 8th Ave., New York, N.Y. 10014. ●

Cyclopean Hours
August 27, 1883

Krakatoa lifted heavenward in blocks,
with the loudest blast ever heard.
Lightning unzipped circuit patterns in
a sky choked with fine glassine dust.
And a 100-foot-wall of water washed east,
gathering a sea of corpses before it like
an angry god hauling on his nets.

—Robert Frazier

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SF CONVENTIONAL CALENDAR

by Erwin S. Strauss

Things slow down around WorldCon, so here's a look further ahead than usual. Join the 1988 WorldCon now. Plan now for social weekends with your favorite SF authors, editors, artists, and fellow fans. For a longer, later list, an explanation of cons, & a sample of SF folksongs, send me an SASE (addressed, stamped #10 (long) envelope) at 4271 Duke St. #D-10, Alexandria VA 22304. The hot line is (703) 823-3117. If a machine answers, leave your area code & number. I'll call back on my nickel. Early evening's a good time to phone cons (most are home numbers) (be polite). Send an SASE when writing cons. Look for me at cons with a Filthy Pierre badge.

JUNE, 1987

19-22—**British National Con.** For info, write: **Meenan, "Burnawn," Stirling Rd., Dumbarton G82 2PJ, UK.** Or call: **(703) 823-3117** (10 am to 10 pm, not collect). Con will be held in: Glasgow UK (if city omitted, same as in address). Guests will include: B. Stableford, J. Saxton. At the Central Hotel.

19-21—**Ozmopolitan, % Meyer, 220 N. 11th, Escanaba MI 49829.** 1987 meet for "Oz" book fans.

27-28—**ReaderCon, Box 6138, Boston MA 02209. (617) 576-0415.** For fans of written SF (no media).

JULY, 1987

2-6—**WesterCon. (408) 998-0264.** Hyatt, Oakland CA. G. Benford, DeCles. The big annual Western con.

3-5—**MapleCon. (613) 726-0887.** Ottawa ON. Marion Zimmer Bradley, artist Guy Frechette, fan Bink.

3-5—**InConJunction.** Adams Mark Hotel, Indianapolis IN. Jack Williamson, A. Offutt, A. K. Andrews.

10-12—**LibertyCon.** Sheraton City Center, Chattanooga TN. L. S. & C. C. deCamp, V. DiFate, Tucker.

10-12—**Archon. (618) 337-9181.** Henry VIII Inn, St. Louis MO. Glen Cook, K. Berdak, J. P. Hogan.

17-19—**Okon, Box 4229, Tulsa OK 74159. (918) 622-2225.** C. Cherryh, L. & P. Killough, Bob Tucker.

17-19—**UniCon, Box 7553, Silver Spring MD 20907.** Holiday Inn, Annapolis MD. D. ("Sundiver") Brin.

24-26—**ConVersion, Box 1088, Stn. M, Calgary AB T2P 2K9. (403) 242-1807.** Joan Vinge, Jim Frenkel.

24-27—**MythCon, Box 537, Milwaukee WI 53201.** Annual High Fantasy con (Tolkien and the Inklings).

31-Aug. 2—**RiverCon, Box 58009, Louisville KY 40258. (502) 448-6562.** Bob (Slow Glass) Shaw.

31-Aug. 2—**WeaponsCon, %Koch, 835 Chat. Bank Bldg., Chattanooga TN 37402.** Atlanta GA. Theme: "Weapons in SF/fantasy." Members must wear a weapon (if only a paper dagger). L. N. Smith, R. Adams.

AUGUST, 1987

8-9—**26th Japan National Con, 1-10-35 Owari-cho, Kanazawa, Ishikawa-ken 920, Japan.** Yamanaka Spa.

27-Sep. 2—**Conspiracy, 23 Kensington Ct., Hempstead NY 11550.** Brighton UK. The 1987 WorldCon.

SEPTEMBER, 1988

1-5—**NoLaCon II, 921 Canal #831, New Orleans LA 70112. (504) 525-6008.** $50 to 6/30, then $60.

AUGUST, 1989

31-Sep. 4—**Noreascon 3, Box 46, MIT PO, Cambridge MA 02139.** Boston MA. WorldCon. $50 to 9/7.

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